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A Magazine of Architecture & Decoration



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January 1934

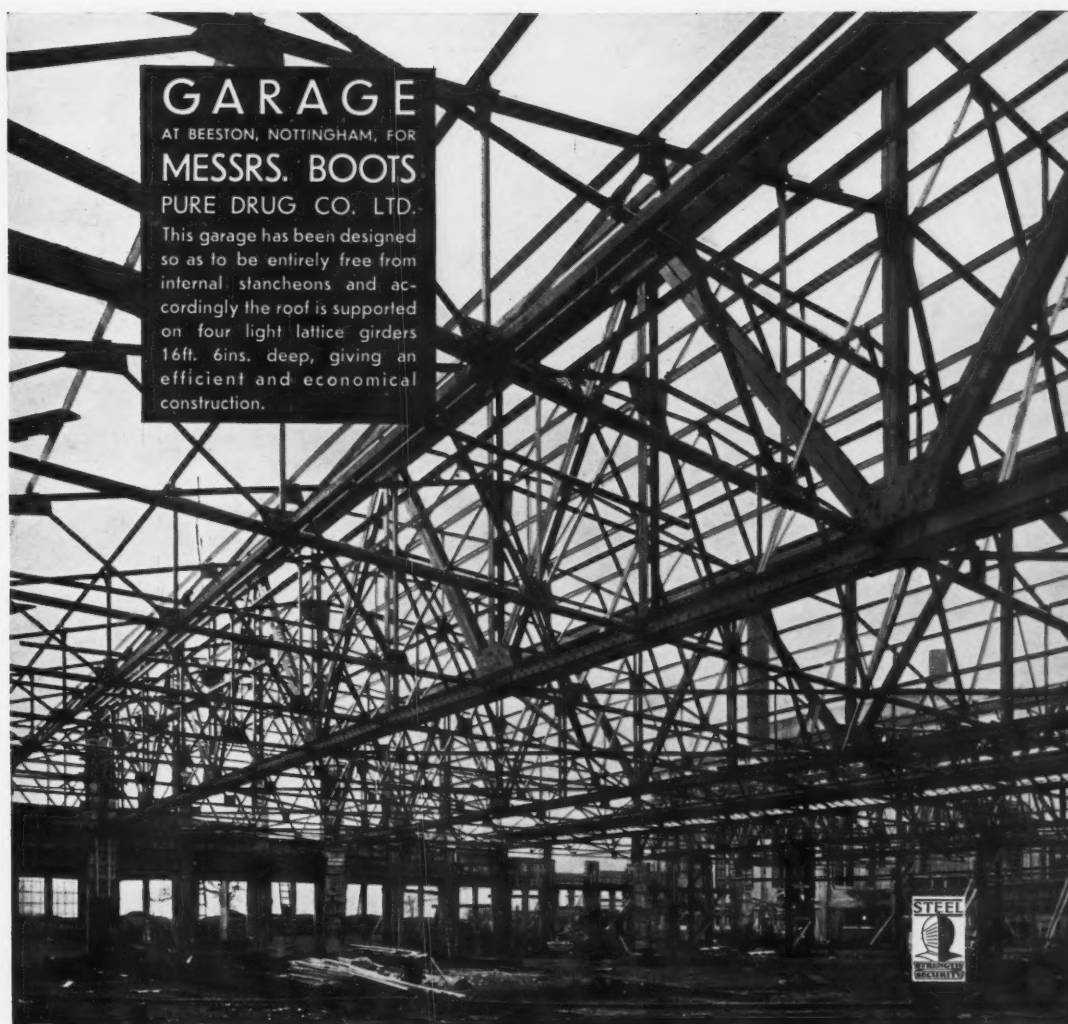
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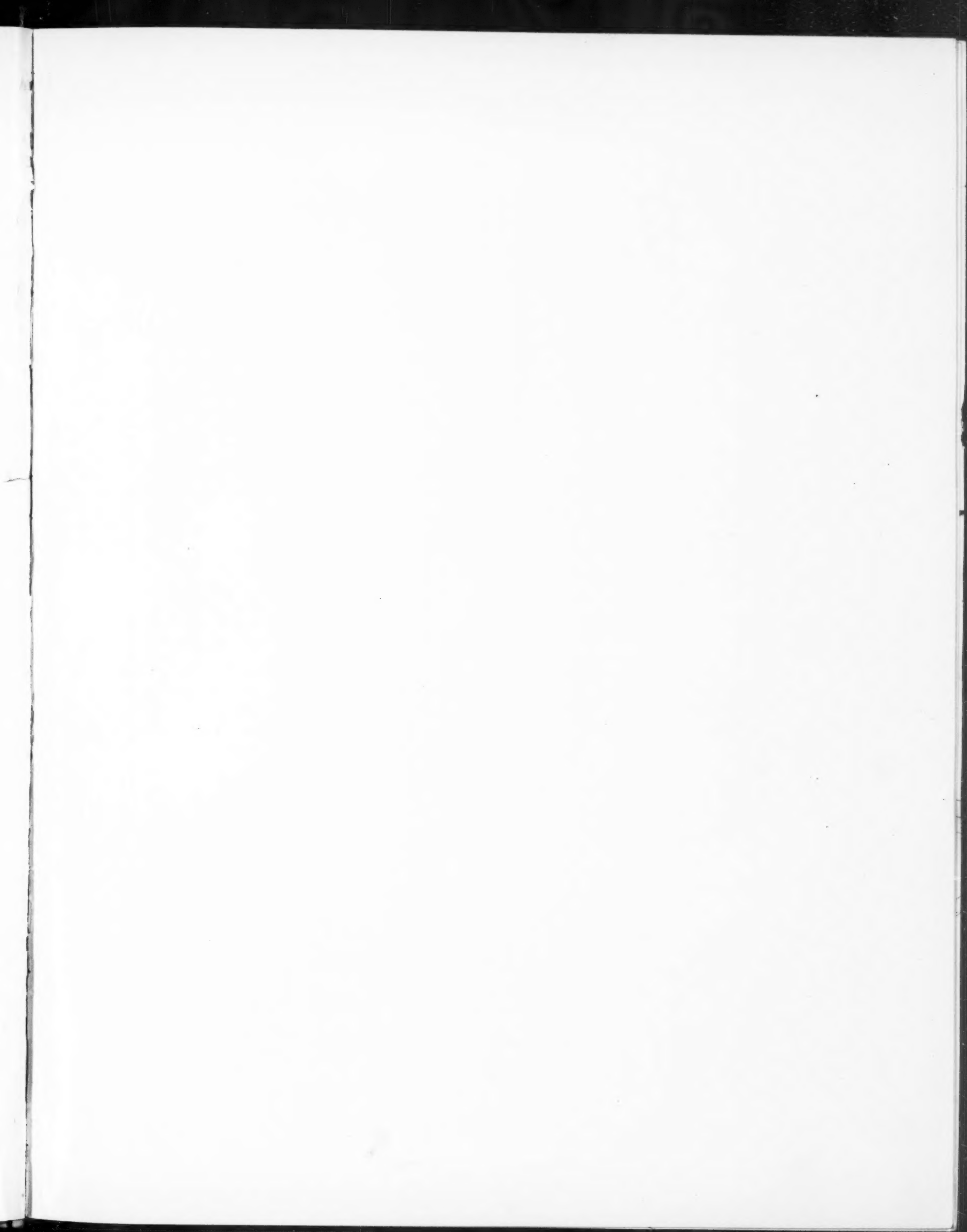
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1908 DESIGNED BY THE LATE
 GEORGE WALTON. . . .
 THE WHITE HOUSE, SHIPLAKE. . . .

This is not a Regency house, as you would suppose at first glance. It is a logical step forward from the Regency; Georgian principles, but not Georgian detail, carried out in contemporary materials. This illustration shows the front entrance on the west side of the house. It will be noticed that the front door, on the raised semi-circular platform, is entirely of glass. The glass continues through to the first floor and for about two feet above the roof of the balcony. Thus the whole of the entrance hall and staircase are pleasantly filled with indirect light, while direct light is reflected down by the ceiling from that part of the window which is above the roof of the balcony. Such a masterpiece as this is many years before its time. George Walton has never received the honour due to him as an even earlier pioneer than Mackintosh. He came from the same

country and from the same school. As Walton himself said last year "the type of work we were then (1892) doing would, I think, even today have been looked upon as modern, but unfortunately the movement, after being distorted and twisted, . . . finished in *l'art nouveau*". That it had plenty of life and purity in it in 1908, The White House, Shiplake, carefully preserved by Mrs. Davison, the widow of its original owner, testifies. The article on the opposite page puts forward the theory that it was not merely *l'art nouveau* which frustrated a great movement, but also the war which brought an end to a method of building which was more international than national. Germany and Austria saw the value of the work of Walton and Mackintosh, while England meandered on with stale renaissance revivals.

George Walton died last month. A further reference to him and to the Exhibition of his work which was projected before he died, will be found on page 36 of this Issue.

Edwardians

IF half the amount of study that is devoted to the eighteenth century or even to the Regency were given to Edwardian architecture, post-war architects would benefit themselves and get on a little better with their elders. People, however, are already beginning to look on the 'nineties with impartiality, and before we know where we are we will find them taking trouble over the Edwardians. That will be most interesting, considering that so many Edwardians are alive. Obviously, as yet, the Edwardians are a little too near to be viewed with equanimity. "Hard without principles behind their hardness, unscrupulous and pleasure-loving without the accompanying compensations," they have been described in a recent sixpenny weekly. And what is not really true of the Edwardians is often too true of their architecture. Certainly there does not seem to be much principle or rather architectural theory behind their commercial buildings, their domed and turreted blocks of flats, their gaudy emporia and draughty schools, and there is a certain unscrupulousness in their destruction of Regent Street and ruination of Knightsbridge and the Brompton Road, to take two examples from London alone.

But the post-war generation feels so bitter because it is so near to the Edwardians and has so rigidly been kept under by them. The Edwardians started their lives as children of the Victorians: they knew what plenty was and a settled order of things; they had no need to construct theories for what they did or built. Their illusions were not shattered until they were grown up and when they were too old to start again. But the generation at present in its thirties and trying to assert itself in architecture was born for chaos, and theorising was the only way by which it could comfort itself in a world where there is no work, although so many buildings completed in this century seem as though they ought to be taken down and done again. No age, not even the Victorian, is so remote from today as the Edwardian.

Yet upon looking through back numbers of THE ARCHITECTURAL REVIEW for 1905—in the glorious days when it was so skilfully edited by Mervyn Macartney—it is a revelation to find that the most prominent architects in its pages are still the most prominent architects today and that even where they themselves are dead, the offices which they started are still busy turning out the same sort of thing as they turned out in 1905. These pillars of the Commercial Queen Anne who were going on even before 1905 still remain on top. The tradition of Brydon, Colleutt, Henry T. Hare, Norman Shaw and Ernest George and Yates is dying hard. What has happened, if it is

not unkind to say so, is that the nineteen-five men and their satellites do not dare to let go the reins. They have held them while one generation was wiped out by the war and now despair and unemployment are wiping out another.

This, one would suppose, is the vital stumbling block between young architects who are not time-servers today and the Edwardians. Before the war English architects were uncertainly divided (apart from their personal divisions) into two camps. The first was concerned with reviving the eighteenth- and late seventeenth-century classical styles, both at home and abroad, and "adapting them to modern conditions." This was, as it is today, the stronger camp of the two. Most knighted architects were, even then, prominent members of it.

The second camp originated with Voysey and Baillie Scott and Lutyens, doing simple domestic work in England and the Isle of Man, Walton and Mackintosh and a few other members of the Glasgow school in Scotland. The last school was the more daring and experimental, if not the more vigorous of the two. The simplicity and insistence on form and honesty of both these schools of thought in the second camp became whittled down to olde-worlde oak by imitators of Voysey and Baillie Scott and to *l'art nouveau* by foreign imitators of Walton and Mackintosh. Even Mackintosh himself came under the influence. Not so George Walton, of whose recent death we regret to learn, and who in 1908 produced The White House, Shiplake, illustrated on the frontispiece opposite. This building alone proves that the Edwardians were as aware of what Corbusier and Mendelsohn have later pointed out, as are any so-called modern young architects today.

But the second camp, which is to many people the more interesting of the two, had a hard time. Not only was it corrupted on the one flank by sham Tudor and on the other by *l'art nouveau*, but the internal variations with which it became associated brought it to grief. Voysey, Baillie Scott, Lutyens, Walton and Mackintosh were far better known in Austria, Germany and Holland than in England. With the exception of Lutyens, they still are. The war brought an end to this and cut off their practices and made their reputations suspect. Now we must do what we can to give them some of the honour that is their due. For this reason it is intended to have an exhibition of George Walton's work as soon as possible. He is more than merely representative of a great pioneer movement. He stands alone, like every genius.

Do not blame the Edwardians, but blame the war and its fierce nationalism for causing the wrong camp to

triumph. If Voysey, Walton, Mackintosh and Edgar Wood had been in the position of prosperous architects today: if Beresford Pite, Lucas, Bedford, Bodley and Ricardo had been a little bolder, all would have been well and Commercial Queen Anne would have become merely comic instead of painful. As it is, we can only

remember, too late, that they were great and that they went too early the way of all pioneers. But the poem printed below from an obscure back page of THE ARCHITECTURAL REVIEW for June, 1905, should show that some Edwardians at least would have had sympathy with young architects today.

IF WHITMAN HAD BEEN AN ARCHITECT

Signed with the initial "B" and without any comment this poem appeared in the Notes (page 258) of THE ARCHITECTURAL REVIEW for June, 1905, *Volume xvii*.

Often I hear of the glory of the architecture of ancient Greece; of the proud Romans; of sombre Egypt; the praise of the vast Byzantium and the lofty Middle Ages, too, I hear.

But of the glory of the architecture of the Modern I never hear.

Come, you Modern Buildings, come! Throw off your mantle of deceptions; your cornices, pilasters, mouldings, swags, scrolls; behind them all, behind your dignified proportions, your picturesque groupings, your arts and crafty prettinesses and exaggerated techniques; behind and beyond them all hides the one I love.

O you Modern, I can see how sadly you have been misunderstood.

O you I love, do not hide yourself from me, I know you and love you: you shall be free: the pure air of heaven shall be yours.

O! I see how subtly you have hid from the gaze of those who sought you after studio methods. But I know that you are not to be found by studio methods.

The Academy and the Universities do not hold you in their formulas, and I see you laughingly evade the younger cult who seek to find you in craftsmanship.

I know your haunts.

I see you lurking behind the bricklayer laying his bricks.

I know the ring of the trowel striking the brick is to you the most exquisite music, and I know that you think the bricklayer the most perfect of musicians.

The labourer, carrying his hod full of mortar or bricks, his quid and his oath are dearer to you than the architect in his office or the sculptor in his studio.

I see you love that derrick and steam crane every bit as much as you love the Parthenon.

O! I know that you laugh at me just the same, and evade me just the same.

I know that I do not hold you any more than the rest; but I do not want to hold you; I know that the only way to hold you is to leave you free.

See, I laugh at my own work, too; I am not afraid to confess that I can lie and deceive just as much as any.

But I do not deceive myself—I know you are not *there*.

I know your haunts.

Along the city on the bus, from Charing Cross to the Bank.

What do you think of yourself in this varied clothing?—But down a little side street, maybe in the grime of the slums, back of St. Mary's, I see you smiling grimly, naked—but happy—and free!

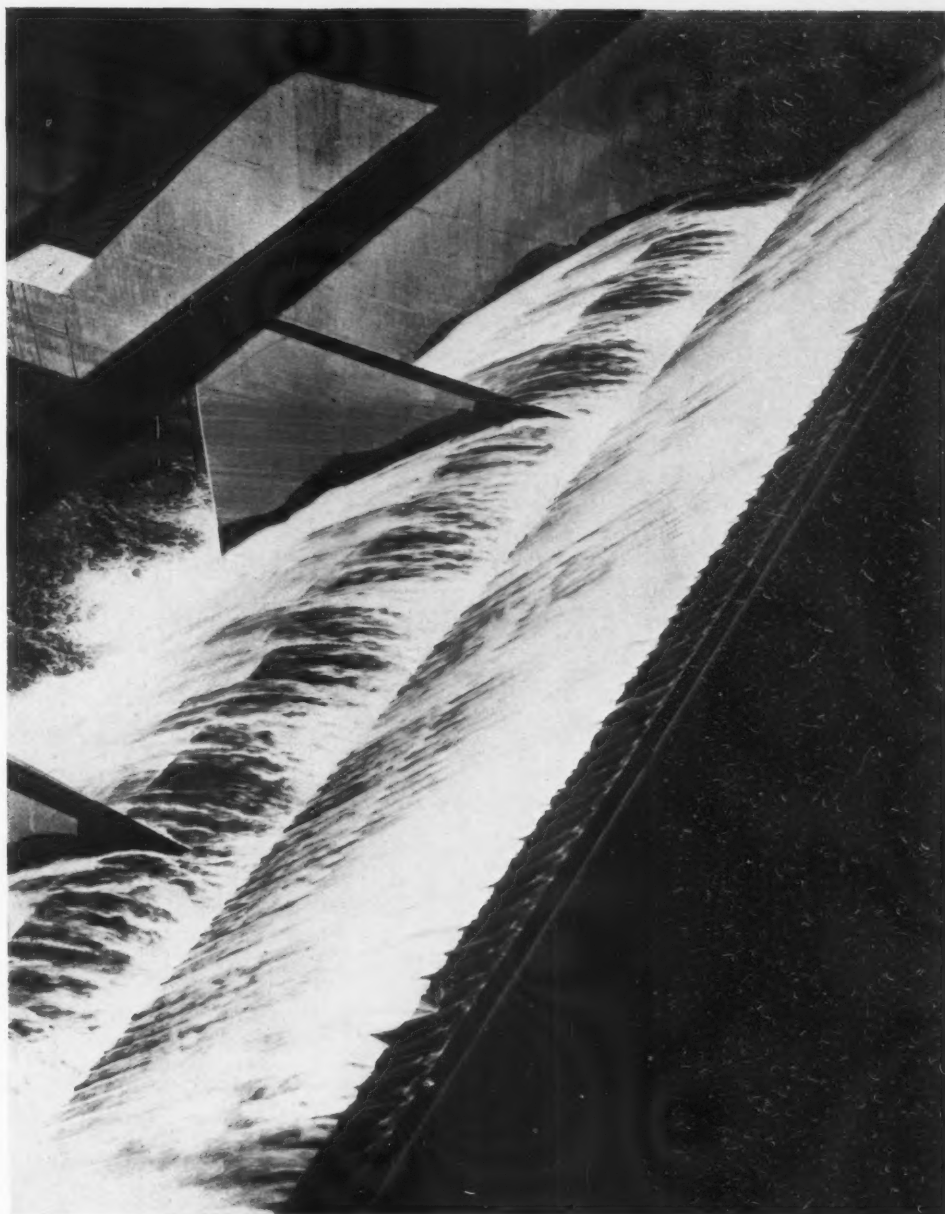
O! I love you, dear heart, but I will leave you free.

You shall be as naked as you choose.

CHENDEROH, MALAYA, HYDRO- ELECTRIC POWER STATION

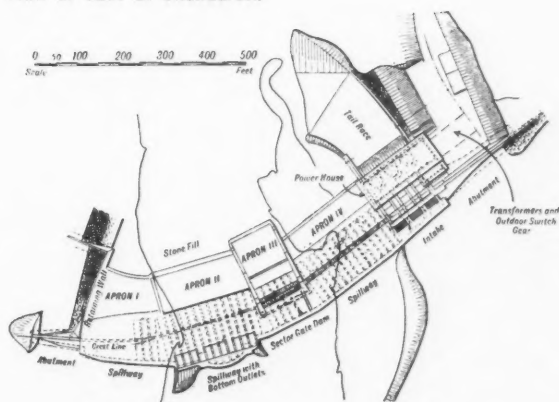
RENDEL PALMER AND TRITTON, AND
VATTENBYGGNADSBYRAN (VBB),
CONSULTING ENGINEERS.

OSVALD ALMQVIST, ARCHITECT



Water flowing over the sector gate.

Plan of dam at Chenderoh.

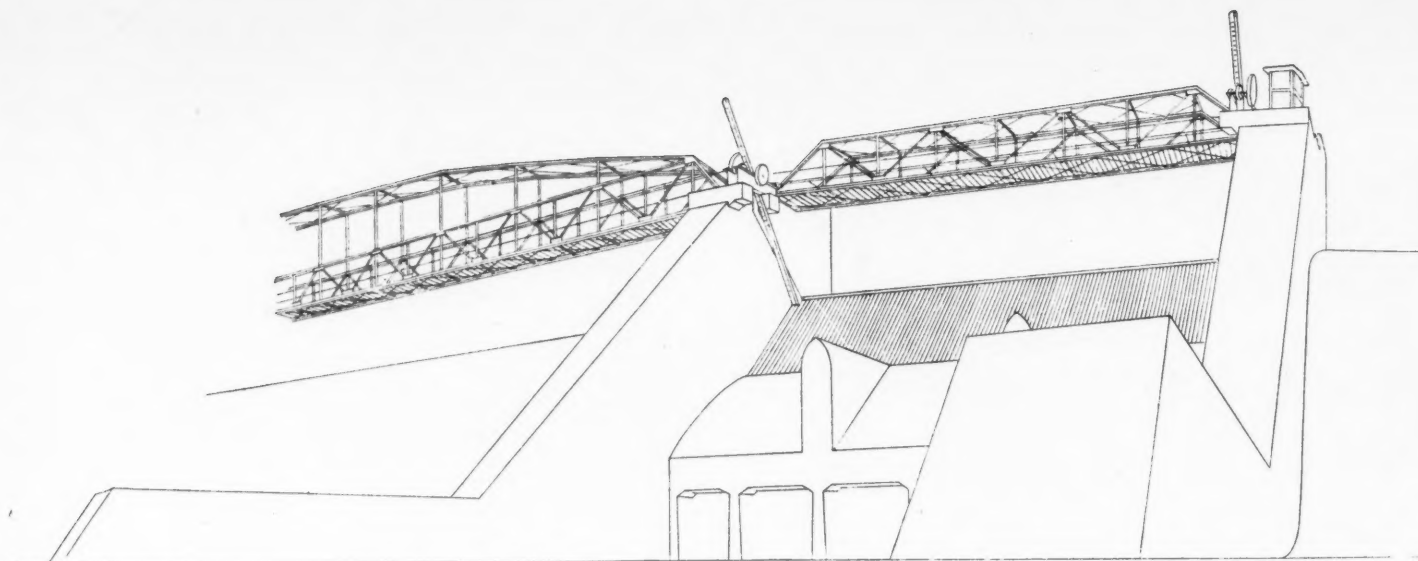


Malaya is the greatest tin producing country in the world, the richest deposits being found in an alluvial state in the Kinta Valley in the State of Perak. These tin ore deposits appear to have been known thousands of years ago, and the great mathematician and geographer, Ptolemy, who lived in the second century A.D. is believed to have been aware of the existence of tin in Malaya. Old Chinese records also bear witness of tin deposits there, and d'Albuquerque, the Portuguese who conquered Malacca at the beginning of the sixteenth century, mentions that the currency of Malaya consisted of tin coins.

The old method of mining was to a great extent dependent on manual labour, and the machinery gradually introduced was driven by small local steam engines and oil-driven plants. It was for the purpose of supplying

power to the mines in the Kinta Valley that the Perak River Hydro-Electric Power Company was formed in London in 1926. At a cost of over three million pounds this company erected a hydro-electric power station at Chenderoh on the Perak River, and a steam power station at Malim Nawar, situated about 40 miles south of Chenderoh. The installed capacity of the hydro-electric station is 36,000 H.P., and of the steam station 25,000 H.P. The distribution system consists of eleven outdoor sub-stations and about ninety miles of high tension transmission lines.

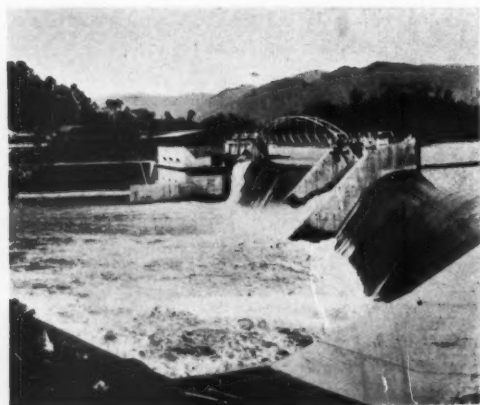
So far as buildings for industrial purposes are concerned, water power stations are among those which are usually subjected to special architectural treatment, as they constitute a definite part of the landscape on account of their open and prominent



Downstream view of the spillway and sector gate dam.

CHENDEROH, MALAYA,

Downstream view of sector gate dam with two concrete jet dividers.



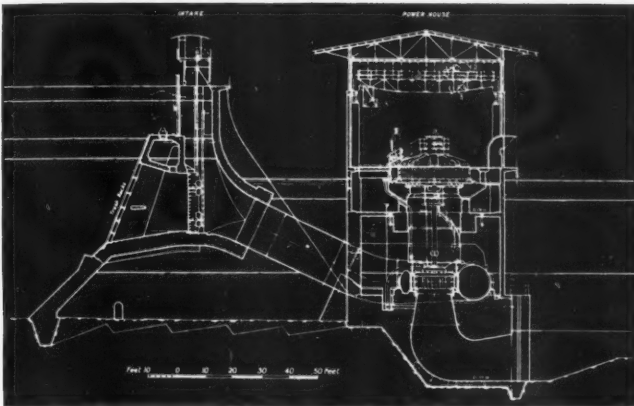
The power house and dam from the left bank of the river.

position. Theoretical speculations on the aesthetical requirements of water power stations demand that these buildings should give an impression of "massiveness," "heaviness," "control of power," or that they must be of a monumental nature, etc. The result is that water power stations all over the world show an assortment of styles, personal and national—one looking like a castle, another like a fortress, and yet another like a church set in the middle of a stream; and all the styles are supplemented with mechanical, electrical and other equipment. It is very doubtful whether

working along such lines creates an impression of good architecture, and more particularly of good industrial architecture. A more satisfactory result would be obtained by concentrating on a design which pays due regard to utility.

The superstructure of a water power station is, in common with other industrial buildings, only a protection for machines, instruments and personnel. It is therefore obvious that to obtain their proper *milieu* these relatively subordinate buildings must be of a neutral architectural character, and not overburdened with decorations

HYDRO-ELECTRIC POWER STATION



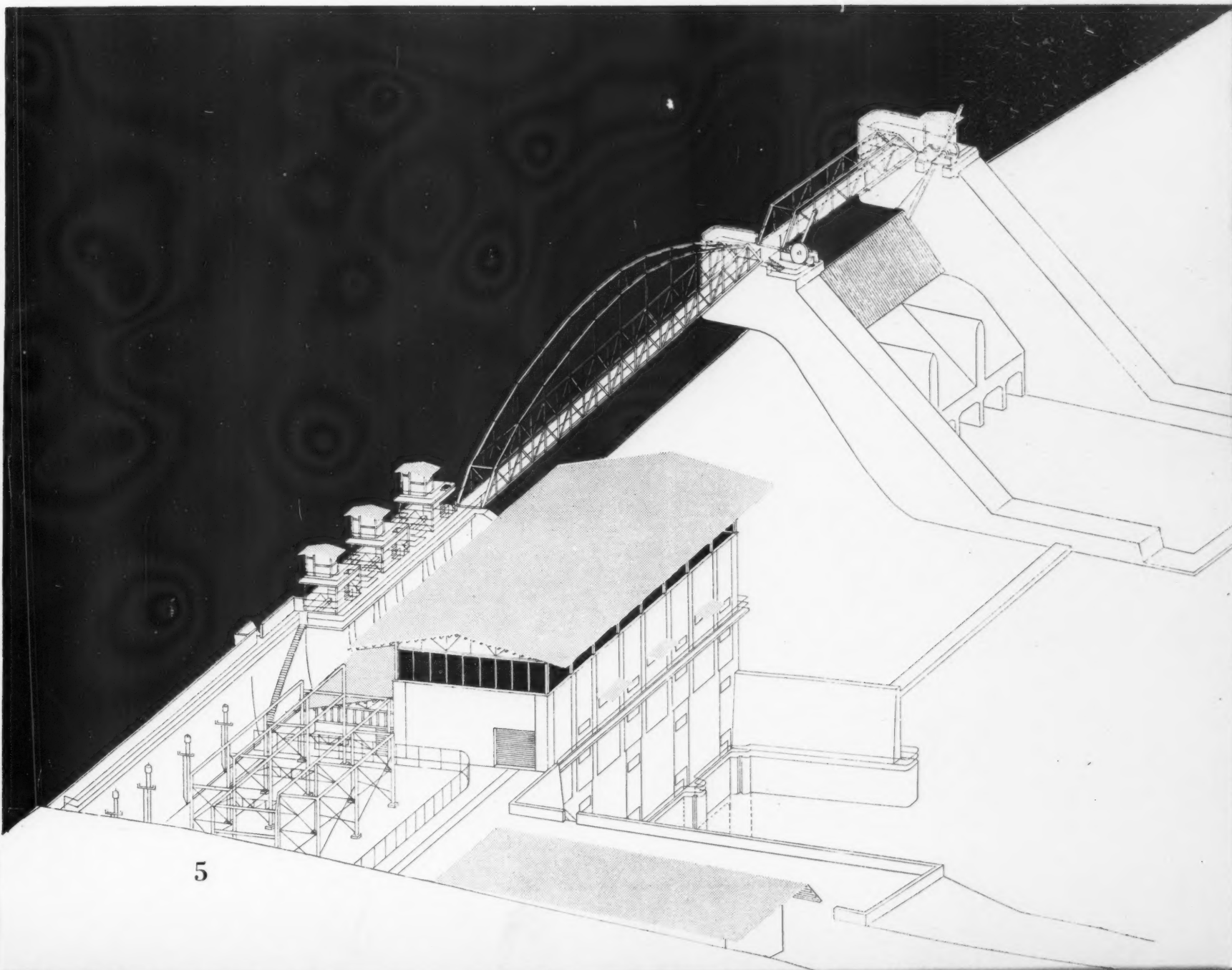
Cross section through intake and power house.

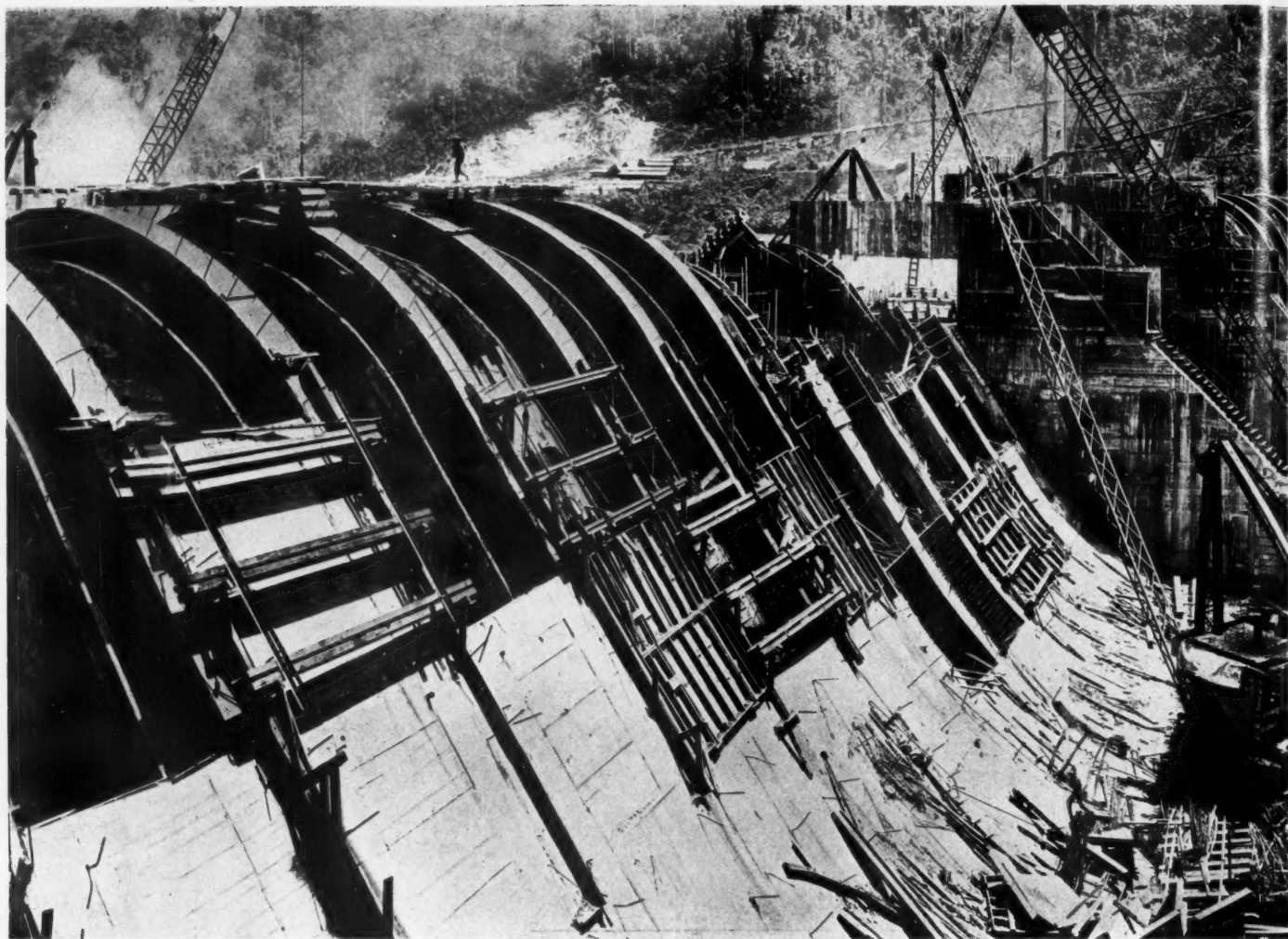
and other "false pretences" which would submerge the more vital engineering parts of the scheme and divert the attention. Provided the proportioning was good, and the appearance unpretentious, the monumental impression would then emerge in simple and natural expression. These were the leading principles governing the architecture of the power station at Chenderoh, and efforts were made to co-ordinate the building with the dam, intake, outdoor sub-station, etc., and thereby obtain a homogeneous design.

As the Power Company was a com-

mercial undertaking it was necessary to carry out the scheme as economically as possible without sacrificing in any way the efficiency and usefulness of the plant. This rule was also applied to the power house which was subjected to the same practical and economical considerations as the rest of the plant, and for this reason was the subject of special architectural treatment. The work was carried out in reinforced concrete of modern design, based on hydraulic model tests, and as, for practical reasons, the facing of the dam and sub-structure of the power house did not have plastering

A perspective drawing of the power house and dam; the structural steelwork on the left is an outdoor sub-station, and the sector gate dam is seen on the right.



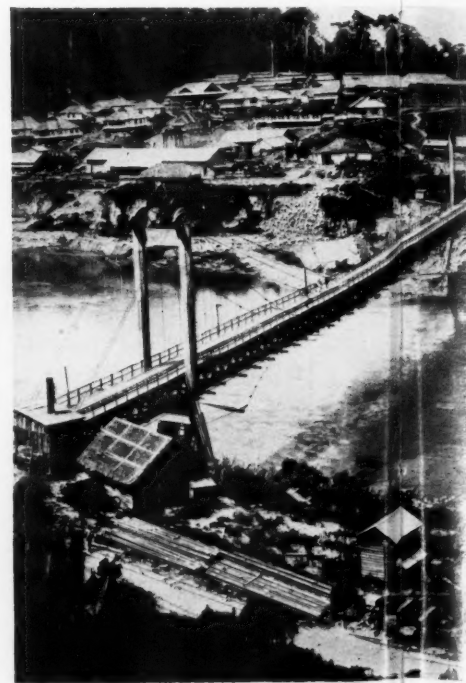


The dam during construction.

Water flowing into the bottom outlets during construction period.



Dam nearing completion. The temporary suspension bridge across the river is timber.



this was also omitted from the super-structure in order to obtain uniformity. The roof slopes very slightly, and is painted aluminium, the walls of the building being whitewashed. In the interior the aim has been to obtain the coolest possible atmosphere. The walls to a height of about 6 ft. above the floor are covered with glazed bricks of a white-greyish colour. In the generator room the general colour scheme, including the paint of the machinery and the tiles of the floor, is carried out in an "ice-colour," the different shades being specified according to degrees of the Oswald colour

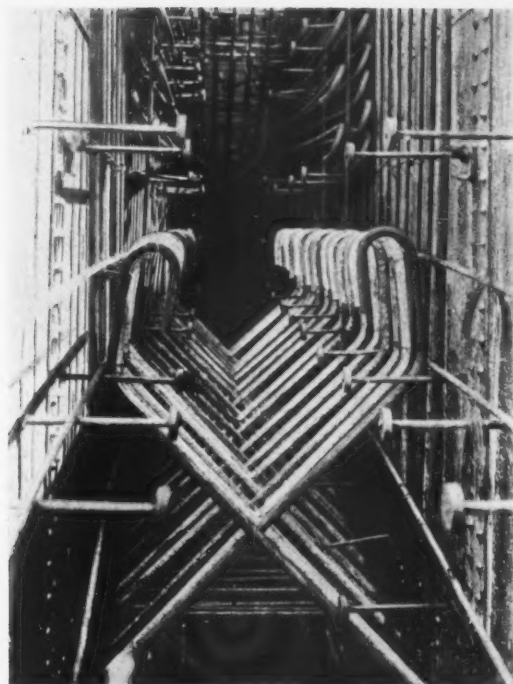
scale. The sun-shades above the hot air outlets in the down-stream wall of the generator room are painted aluminium, which colour was also used for the steel bridges and structural steelwork of the outdoor sub-station.

The consulting engineers for the scheme were Messrs. Rendel Palmer & Tritton, London, and Messrs. Vattenbyggnadsbyran (VBB), Stockholm. The architect for the power house was Mr. Osvald Almqvist.

We are indebted to Mr. Bo Hellstrom for placing the material for this article at our disposal.

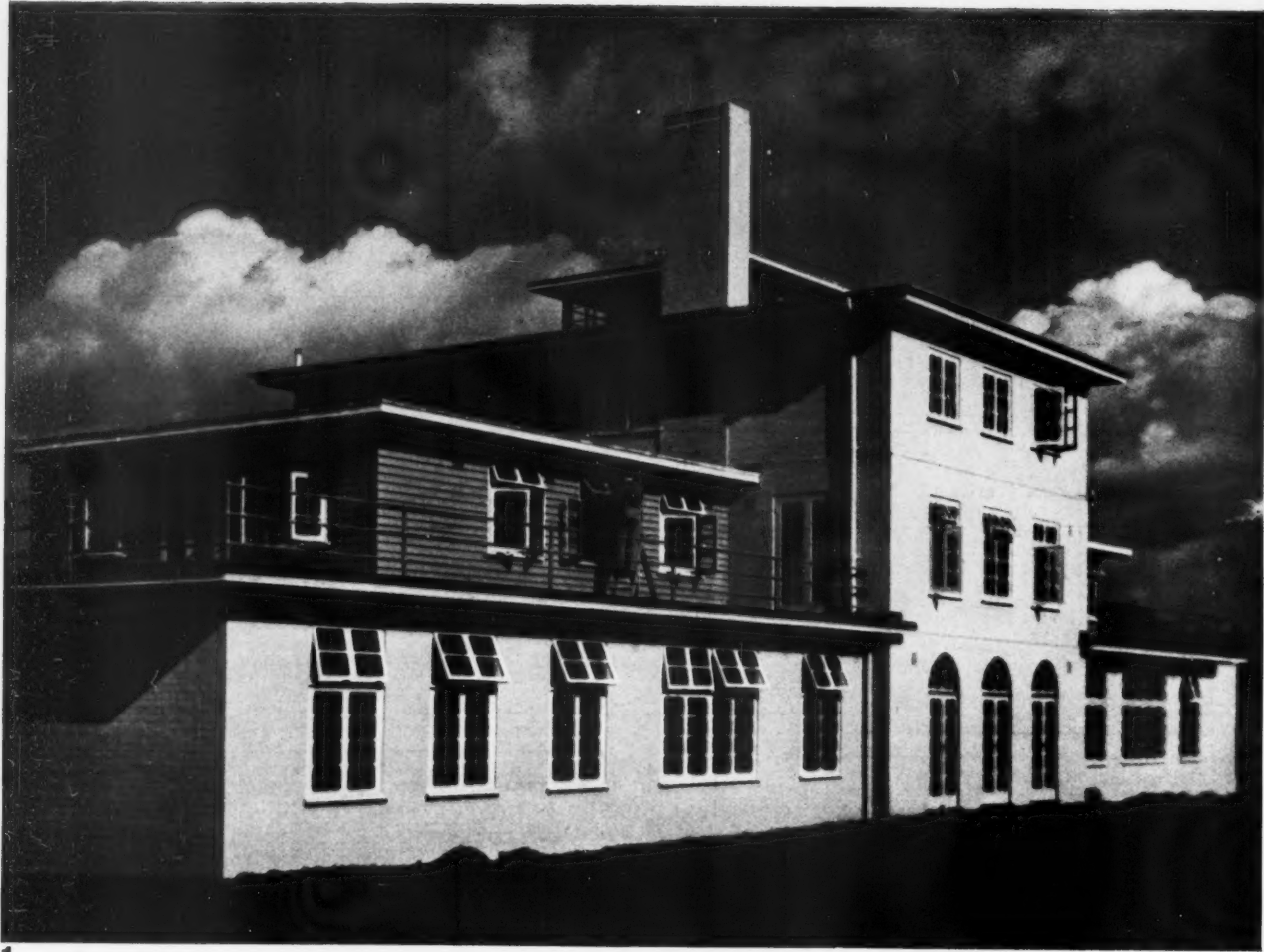
CHENDEROH, MALAYA, HYDRO-ELECTRIC POWER STATION

Ready for concreting: reinforcement bars in one of the buttresses of the bottom outlet section.

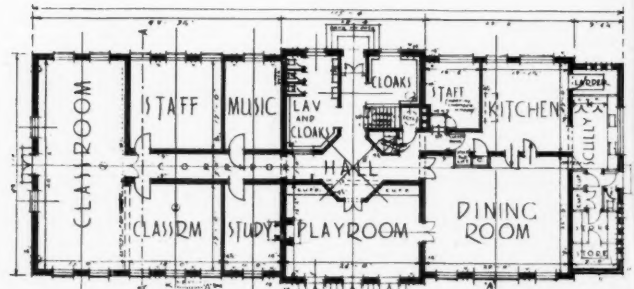
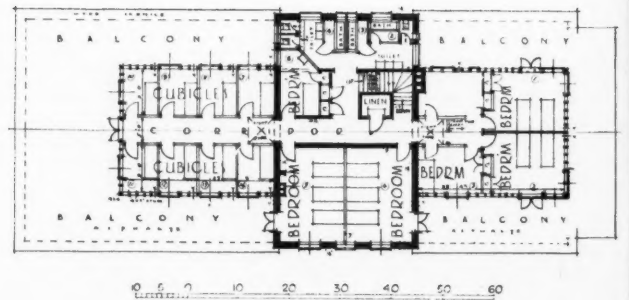


temporary
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This school has a special interest in that, having been first designed as a quasi "free classic" building, it was, as it were, driven to re-designing itself in a more functionalist fashion by sheer pressure of circumstances. Delay over getting possession of the site reduced the time available for building to the barest minimum, whilst gradually added requirements in the way of accommodation made it necessary that the construction should be as direct and economical as possible and shorn of all inessentials.

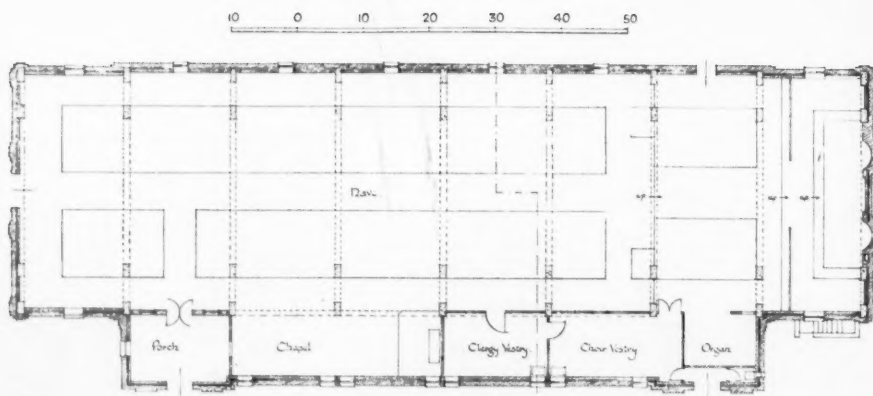
It should be added that the architect welcomed this dictation as an educative piece of discipline, and in no way regrets the superseding of his first formal imaginings now only apparent, vestigially, in the centre block. 1. The back façade of the school. The brick walls are an apricot colour, the superstructure is blue and the windows French grey. 2. Plans of the ground- and first-floors. 3. A terrace bedroom. 4. One of the classrooms, the walls and ceiling of which are honey coloured. 5. The roof where the children rest. The blue of the distant scenery is seen through rails painted peacock green.

CHURCH OF ST. FAITH, LEE-ON-THE-SOLENT

JOHN SEELY AND PAUL PAGET, ARCHITECTS

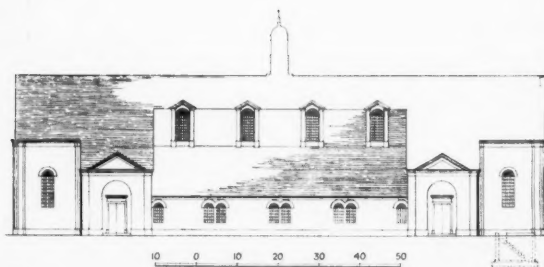


1



2

1. The choir from the south-west, showing the officiating Priest's return stall, and, through the arch of the north ambulatory, the Bishop's chair. The whole of the return and choir stalls is semi-structural, being built up in brick and plastered, with English cedar panels and continuous book rests. All the plaster work is colour-washed a shade of broken white. The fittings throughout the church were designed by the architects, and in this photograph one of the electric light pendants may be particularly noted, made of stainless metal with plate-glass circular discs over. 2. The plan of the church consists in a nave without aisles, and a morning chapel adjoining the south porch. The church provides accommodation for a congregation of 400. The main structure of the building is composed of nine reinforced concrete ribs, which span the nave and chancel. 3. The south elevation. The external walls are built in grey-brown bricks with red-brown brick dressings. The roof is hung with brown sand-faced tiles. It is intended to add a flèche in the centre of the roof as soon as funds permit. At the east and west ends, the slope of the main roof is carried down to form an organ chamber and porch respectively, with reconstructed stone pediments. 4. This general view of the church shows seven of the reinforced concrete ribs which span the nave and chancel. Each rib consists in a wide central arch of elliptical shape, with, on either side, smaller arches forming north and south ambulatories throughout the whole length of the church. The pulpit and lectern, which are in the form of ambones, are exactly similar, and are built up on either side just west of the arch to the choir. The high altar is of stone, with, behind it, a fine blue velvet curtain, hanging from a silvered canopy.



3



4

new eyes for old

by p. morton shand

LIKE the steam locomotive, photography is barely a century old. Paradoxically enough it had to wait for the painter to divine its imaginative potentialities. And still more paradoxically, the painter was only free to reveal them after a drastic frontier revision of his own province. Now it is self-evident that for accuracy of facsimile eye+hand cannot compete with eye+lens, the pencil-point with the printing-frame. The Impressionists were the first to realize the implications of this simple conclusion. By making colour theme as well as medium they sounded the knell of representational art. Anyone who has seen the Hon. John Collier's famous decomposition, *Sentence of Death*, will realize that the artist's idealized Harley Street specialist was really an Elliott and Fry coroner holding a belated inquest on a corpse already pretty far gone. Thus the province of photography became defined as what seems the direct negation of art: reproduction.

The historical evolution of photography can be very briefly resumed. Up till the last decade it was employed in two ways: either "artistically," or as a mechanical means of recording the obvious semblance of things. The "artistic" uses were artistically negligible because they were as purely imitative as machine-made emulations of handicraft characteristics. From the Victorian Christmas card to Vorticism, every successive phase of nineteenth-century painting was faithfully mimed by the men who disappeared under black velvet cowls as ritualistically as "real" artists donned velvet jackets. In straightforward reproduction, on the other hand, the most far-reaching advances in technique were made. Here science showed the way back to art. But being "soullessly mechanical" these progressive perfections were treated as of as little importance as the invention of the half-tone block and the rotary press. All those who "took up art seriously," or had a "true feeling" for it, scorned photography. The cultural gulf between painters and photographers was as profound as the social gulf between barristers and solicitors. True, academicians like Herkomer, that notable pioneer in the mass-production of "speaking likenesses," deigned to use photographic labour-saving devices for quick-service portraiture. But this no more implied a budding identity of the two professions than did the hand-colouring of family groups by humble local photographers.



Street

Moholy-Nagy

Though Art continued to hold a mirror up to Nature which photography showed to be cracked and fly-blown, Bohemia remained gay and exclusive as ever.

"Photography considered as the art of representation does not mean the mere copying of nature. This is shown by the comparative rareness of a 'good' photograph. Among the millions reproduced in books and papers it is only every now and then that we come across a really fine one. And the odd thing is, though proof in itself, that we instinctively pick out these 'good' photographs, regardless of the strangeness of their 'themes,' once we have trained our vision to formulate new criteria for chiaroscuro effects and close-up textures arrested in a hundredth or thousandth of a second."

"Through the development of photography light and shade were for the first time fully revealed, and employed with something more than purely theoretical knowledge. Through the development of reliable artificial illumination, and the power of regulating it, an increased adoption of flowing light and richly graduated shadows ensued; and through these again a greater animation of surface, and a more delicate optical intensification. This manifolding of graduations of tone is one of the fundamental 'materials' of optical formalism—which still holds good if we pass beyond the immediate sphere of black-white-grey values to coloured ones."

With the advent of the films it began to be realized that photographic representation, if treated selectively, could be at once a key to the significant or exceptional, and a synthesis of the general aspects of either single objects, or complexes of objects in juxtaposition; and that this would open up an entirely new field in art. To anticipate, recognize, and seize these transient self-patterns and chance designs postulated the kind of "eye for form" in whose retina a "perfect sunset" would be reflected as

* *Malerei, Fotografie, Film.* By L. Moholy-Nagy. Munich: Albert Langen Verlag, 1927.
† See note on next page.



Deserted Café

Moholy-Nagy

neither more nor less intrinsically æsthetic than the naked steel framework of a skyscraper. Past ages have seen the visible world with the eyes of their leading creative painters. We see it through the camera's impersonal lens. But *what* we see is what men like Moholy-Nagy have taught us to discern: the magic of everyday things examined with closer scrutiny, and that arbitrary isolation of casual components which reveals the part as greater than the whole.

The two fields in which the spirit of our age has achieved its most definite manifestations are photography and architecture. Did modern photography beget modern architecture, or the converse? It is an interesting point. But since their logical development was simultaneous, and their interaction considerable, it hardly matters which. What does matter is that it was the same sort of mind and power of vision which has produced both; and that both are based on abstract form.

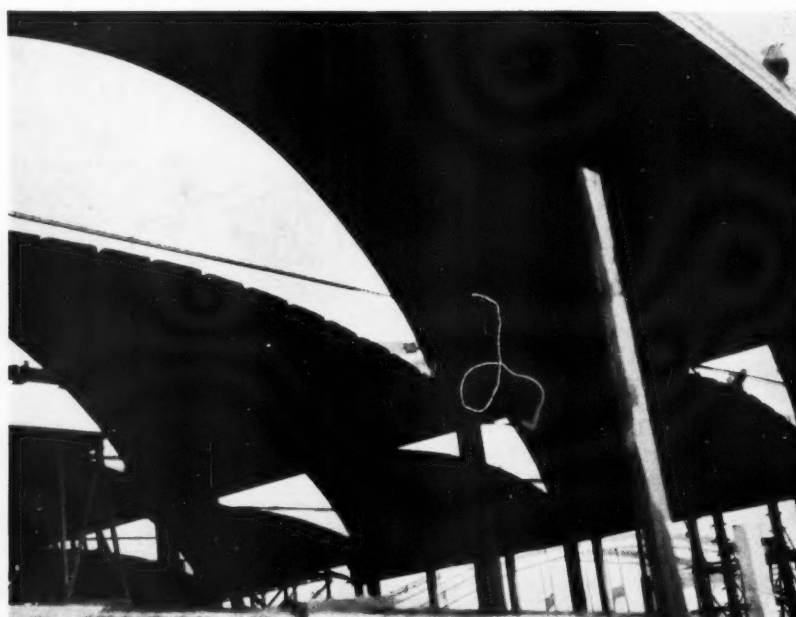
"Photography enables us to participate in new experiences of space. With its help, and that of the new school of architects, we have attained an enlargement and sublimation of our appreciation of space, the comprehension of a new spatial culture. Thanks to the photographer humanity has acquired the power of perceiving its surroundings, and its very existence, with new eyes."^{*}

Ten years ago the pioneers of each were regarded as a handful of cranks. Since then they have changed the physical aspect of one half of the world and what we seek in the physical aspect of the other. Without modern photography modern architecture could never have been "put across." In the early nineteen-

^{*} "How Photography Revolutionizes Vision," by L. Moholy-Nagy, *The Listener*, November 8, 1933.

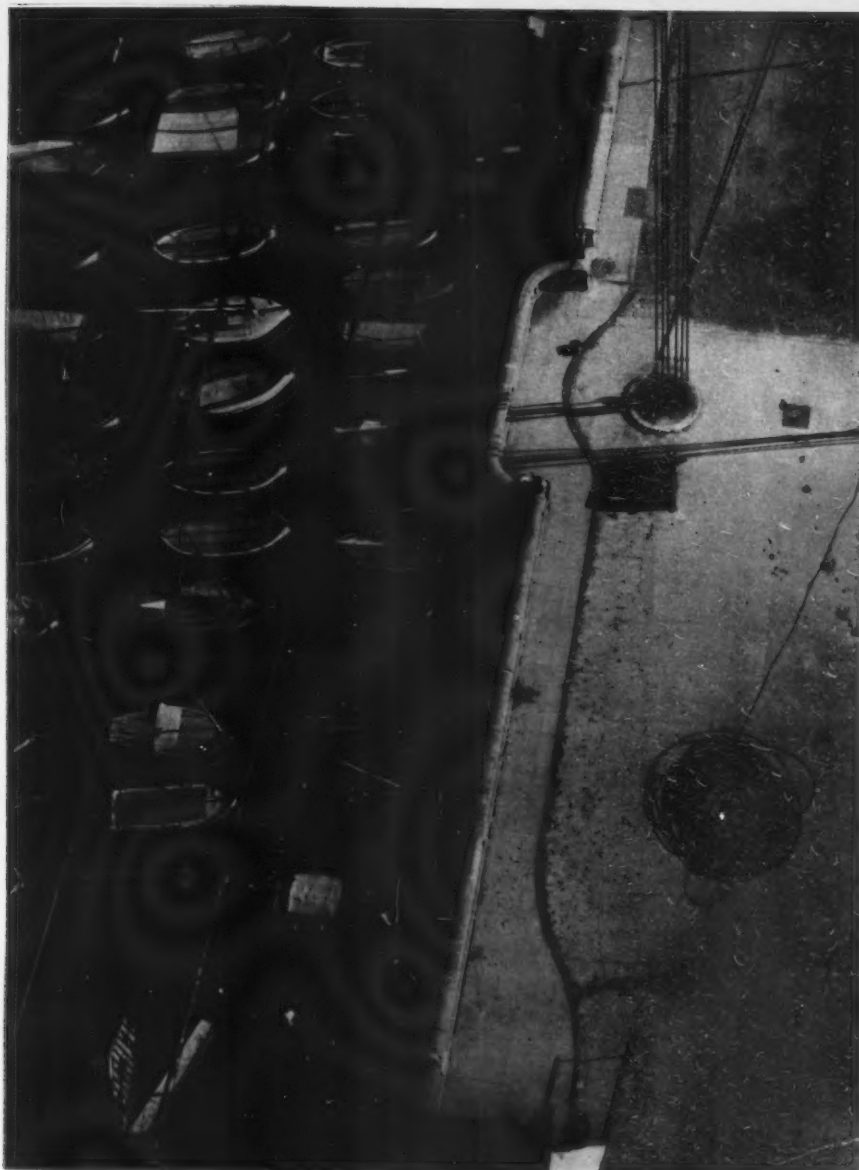
twenties architectural photography was as unimaginatively true to "life" and conventional perspective as any other sort of photography. Men with the cultural equipment of beach photographers walked round buildings at a respectful distance like policemen on their beat flashing lanterns on the impeccably obvious. But the new sort of architects had their buildings taken by the new sort of photographers. A revolution in the technique of architectural photography resulted, which has revolutionized architectural criticism.

The man who did most to evoke and inculcate the new vision was a young Hungarian artillery officer. Moholy-Nagy began to paint abstract pictures while on active service during the war; and it is as an abstract painter that he still chooses to be known. He is, however—"incidentally" as he would say—not only a photographer, but the most famous living. But it is not so "incidentally" that he became the leading architectural photographer, for he has been the close friend of perhaps the greatest of all modern architects, Walter Gropius, since 1923. He was with Gropius at the Dessau "Bauhaus" until 1929; and collaborated with him in the display-planning of the German Werkbund's exhibit at the Paris Salon des Artistes-Décorateurs of 1930, and the Berlin Building Exhibition of 1931. As a constructivist painter Moholy-Nagy was the first to use new synthetic materials like galalith, trolith and cellon; and employ spray-painting to secure more exact chromatic effects. As a photographer he has been a pioneer in the photogramme (the cameraless photography which he regards as the art-form of the future), abstract pattern, negative photography, photomontage, and many experimental fields in silent and sound-film work. It was Moholy-Nagy, too, who designed the celebrated "Tales of Hoffmann" and "Madame Butterfly" scenery for the Berlin Opera House, in which "light is used as the conveyor of the stage illusion"; and invented the "Lichtrequisit" machine for the automatic projection of a moving ribbon of ever-changing luminous forms.



Concrete airplane hangar

Moholy Nagy



A bird's-eye view of a corner of the Old Harbour at Marseilles taken from one of the pylons that support the suspension-platform of the Transporter Bridge. From a photograph by MOHOLY-NAGY.

PLATE ii

January 1934



CUMBERLAND



HOTEL

By E. MAXWELL FRY

The Marble Arch front is faced with Portland stone and the other three fronts with brick and Portland stone dressings. The entrances and ground floor piers are faced with Hopton Wood stone. The podium walls are in axed granite. Architect: F. J. Wills.

IT is now many years since Joseph Lyons opened a tea-shop in competition with Lockhart's, the first multiple teashop concern to cater for mid-day business custom. Since that date a gradually evolving organization has taken firmly in hand the feeding of London's millions; has advanced from the mere stifling of hunger to the satisfaction of wants far beyond the comprehension of the nineteenth century. From teashops to restaurants it moved; and from thence to hotels. As in the competition with teashops, so in that of hotels, Lyons evolved a system which owed its enormous success to the realization that, granted sufficient custom, it was possible to supply the richest and most sumptuous comforts at prices which the middle classes could afford. The Regent Palace Hotel was the spiritual home of countless thousands of provincials, whose preference for this of all London hotels was based on the well calculated financial plan of giving the greatest possible service cheaply to the greatest number of people.

And now another stage is reached. In the Cumberland Hotel, London is presented with the quintessence of a brilliantly successful policy. Let there be no mistake about it. There is no attempt to produce spurious effects or to bate for one minute the amount of service which money may command. The Cumberland does present the very best that this organization can give; the best brains, the best materials, the finest organization and the highest workmanship.

While this building was under construction there was a long continued series of experiments into the most efficient ways of doing nearly everything, and a search for the best and the right materials. One constantly heard from travellers calling at the office that this thing or that thing was being tried out at the Cumberland, that, if one wanted to see the best one-pipe plumbing system, or whatever else it might be, there it was. In this article I am only describing the ground and basement rooms serving the general public and residents. The space above the ground floor is occupied by bedroom accommodation.

The ground floor is served by a main entrance on Oxford Street, and another on Great Cumberland Place, both lead-

ing into public lobbies, extending on two sides of a circular lounge. Beyond this lounge are dining and banqueting rooms and opening from it a drawing room or "Parlour." On the floor below are a grill-room, smoking-room and cocktail bar arranged *en suite*, together with lavatories, cloak rooms, hairdressing saloons and other smaller apartments. There is nothing in all this to compare with the great and nobly proportioned lobbies of an American hotel, for the proportions generally are low and the public lobbies rather in the nature of wide passages for moving throngs. But in any case I found my chief interest lay, not so much with the functional planning of the building, nor yet with the general design of the apartments, but in a marked degree with the superb craftsmanship in new, rare and strange materials. Never before, except if it be in some of the richer parts of Syon House, have I enjoyed the sight of beautiful materials, their loveliest qualities exposed.

In the circular lounge the walls are panelled in a West African mahogany, by name Makore, in which a very beautiful figure, appearing only occasionally in the run of boards offered for sale, is used with extraordinary success, combined with a dark brown marble. In this room the lighting, where it is not indirect, appears as a series of thin tubes outlining and accentuating the sensuous curves of the dome, or the divisions of the encircling walls. These tubes are in fact solid rods of coloured and plain glass illumined by the same lights that flood the ceiling. Here and elsewhere these glass rods are used with much skill. Again in the "Parlour," a veneer of Dutch elm is combined with a teak band at chair rail height and a jarrah skirting, a very graceful combination.

The dining room which lies beyond the lounge is a room of some size, its walls lined with weathered sycamore combined with rosewood and kingwood. As always these woods are of magnificent figure. Lighting and ventilation, provide the end of decoration, if one might say so, for it is in the wall grilles of metal and glass or the suspended trough fittings and coved ceilings that the designer has given his imagination free play, reserving wood for a quiet background. The projecting rails for waiters to lean on is a very pretty piece of detail. Beyond the dining

room, one enters a long banqueting-hall, a simple rectangle, with great continuous troughs reflecting light upward to the ceiling and through thin lines of glass rods downward. These lights are also vents, and on the walls at intervals are circular louvres, designed to carry away hanging smoke. The walls are flush panelled, again in weathered sycamore, in which stray decorative motifs are inlaid in thin metal line. I liked particularly the very practical arrangement which permits waiters to open a service door by applying their foot to a projecting rail a few inches above the floor.

Descending staircases lead from the outer lobbies, one to enter a large foyer, where even with workmen still about, one can visualise years of expectant queueing before the doors of the great grill-room. And as if to confirm the view, a few steps upward from this lobby is the cocktail bar or parlour, to be called *L'Aperitif*, carried out in lap inlaid with a new bronze alloy, which Mr. Bernard introduces to British architecture for the first time, and uses in such amazing variety throughout the building. The inlay work, playing upon a theme of cocks' tails, looks extraordinarily like *cloisonné* on a large scale. And how

extending from floor to ceiling is established from the beginning. These flutings in single lengths of light sycamore are combined with wall panellings in Australian blackwood and vertical bands of stainless steel in dull satin finish, to present a completely harmonious background lit with indirect white light. The skirting and floor surrounds are in Derbyshire brown birds-eye, which maintains the equal colour range, so that nothing interferes with the effect of the mottled green surround to the wide entrance doors. This and the carpet and upholstery complete a very pleasant colour scheme. To one side of this room is the smoking-room, the walls of which are lined in flat moulded lengths of English oak laid horizontally. This wood is in the solid and has a figure which, for beauty and regularity, it would be hard to surpass. Very simple obscured glass lighting fittings and slightly hammered steel metal work complete a satisfactory harmony in the low tones with which we associate a male smoking-room.

These rooms complete the number of major apartments, but by no means exhaust the list of materials which Mr. Bernard has introduced into these and the smaller parts



Left: The entrance doors of "The Digest." The doors and frames are of metal, glazed with pink acid embossed high tensile glass. The door surround and over door are in green and gold lap with coloured motifs inlaid with metal strips. Right: Looking from the principal staircase towards the kiosks and Marble Arch

entrance. The wall linings are of golden travertine. The kiosk is panelled with teak veneer and the counter fronts with macassar ebony veneer and porphyry top and skirting. The kiosk fascias have metal framing and projecting glass lettering illuminated from the back.

successful this little room might be if it were not for the painful colour of its ceiling, which is a sort of pinkish mauve. The use of olive teak reminds me of the very many forms which teak presents throughout these rooms. It must come as a surprise to the generations of architects who have specified teak for every drudgery to see it here, light, dark, streaky or plain, until one hesitates to ask the name of a timber, fearing it will turn out once again to be the ubiquitous teak. From this lobby open lavatories and women's hairdressing saloons, eased for the best part in opaque glass slabs used for the practical purpose of resisting the strong acids which women seem to require in the complicated business of preparing them to face the open spaces of more public places. These rooms are full of interesting innovations—the most remarkable being perhaps the bakelite covers which close without fear of breakage over the capacious black glass basin tops. But on to the grill-room, which, with the adjoining smoke-room, is quite the most successfully designed hall in the hotel. The scheme both of lighting and decoration generally in the grill-room is restrained, and kept within a short range of colour, so that the full effect of the amazing sycamore flutings

of the building. There is, for instance, a stone known as Quarzite, which is harder than steel, will cut glass, but luckily can be split, and when worked to a rough surface provides an everlasting wall lining in a variety of cool pastel shades. As flooring material, it is, on account of these properties, exactly fitted to its job. Then again, there is the non-corroding bronze alloy which is used wherever metal can perform a decorative or useful purpose: in doors, in well moulded hand-rails, in grilles or in inlay. Its best finish is that of a jeweller's sand-blast, very fine. Finished thus it is not subject to dirtying by handling as it is when left polished, and it is, therefore, only polished where it can be lacquered and left out of reach, or on hand-rails where very constant traffic keeps the surface bright. Then again, there is the moulded glass work used to great effect in the entrance hall and lounge. There are the telephone boxes, whose opaque glass slab casing leaves no writing on the wall—for very long; there are lighting tubes—a new kind of low tension tube which can be moulded to the architectural forms of the wood or plaster interior; and there are in fact a thousand employments of a thousand materials for which there is too little space even to mention.



The Cumberland Grill at the Cumberland Hotel. The shaped wall panelling is Australian blackwood, and stands in front of the upper plaster frieze which is illuminated by continuous tubular lighting behind the panelling. The pilasters, columns and beam soffites are in sycamore with stainless

steel nosings. The upper parts of the pilasters and columns with beam ends are provided with stainless steel shields and concealed lighting. *Architect-Designer* for the public rooms : Oliver P. Bernard.

PLATE iii

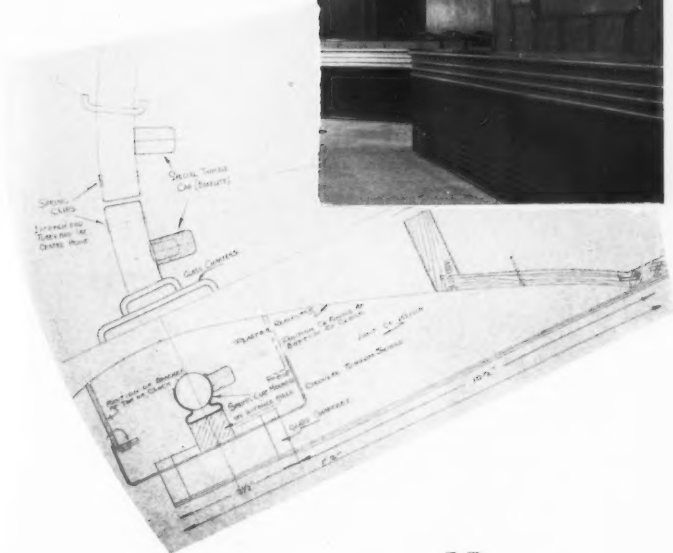
January 1934

A black and white photograph of a wire mesh basket hanging from a metal rod. The basket is rectangular with rounded ends and is suspended by two small metal hooks. The background is a plain, light-colored wall.



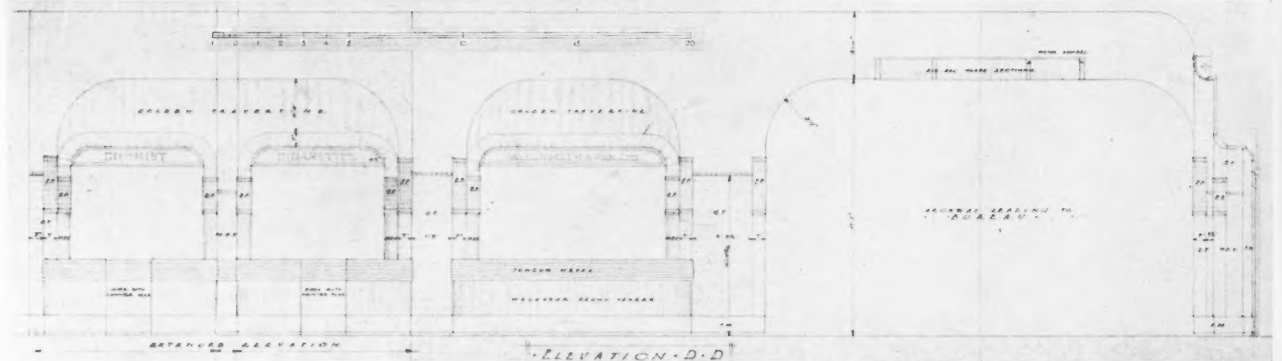
Left, centre: The Bureau, looking towards the Marble Arch foyer. This counter is mainly used by patrons in connection with the booking of rooms, letters, etc. The general treatment of the counters corresponds to that described in the right-hand photograph on page 14. The illuminated clock, of which a drawing of the half section is given below, has a metal dial and hands, and projecting glass chapters illuminated from the back. On the right the top illustration is a detail of the gentlemen's hairdressing saloon. The walls are lined with opaque glass slabs, primrose yellow in colour with a black capping and Tango shoulders, mirror recesses, and door heads. The basin tops are 1 in. black glass.

The recesses are fitted with pink mirrors with side and top concealed illumination. The wall cabinets and doors are in teak with stainless steel surrounds. The floor is in pre-cast rose and green terrazzo tiles. The bottom illustration is of a typical ladies' lavatory. The room is divided into toilet cubicles to give semi-privacy. The cross screens are in teak. The walls and mirror heads are in opaque glass slabs. The basins are black marble. Each cubicle is fitted with a full length wall mirror, and a half mirror on the screen adjoining, and illuminated by a vertical cylinder at the intersections of the mirrors. The floor is in Quarzite blocks of varying colours. All the metalwork is stainless steel, satin finished.





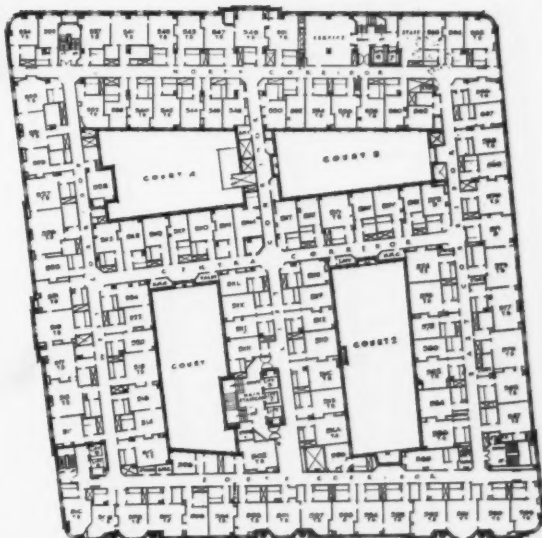
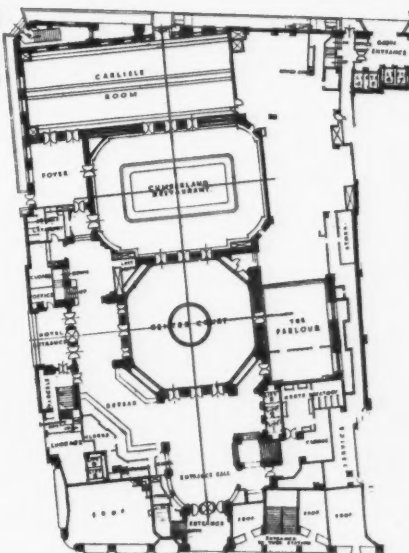
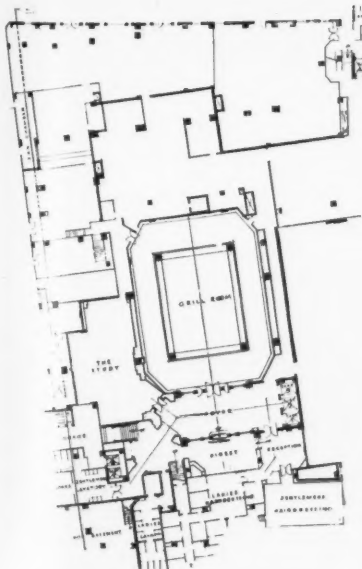
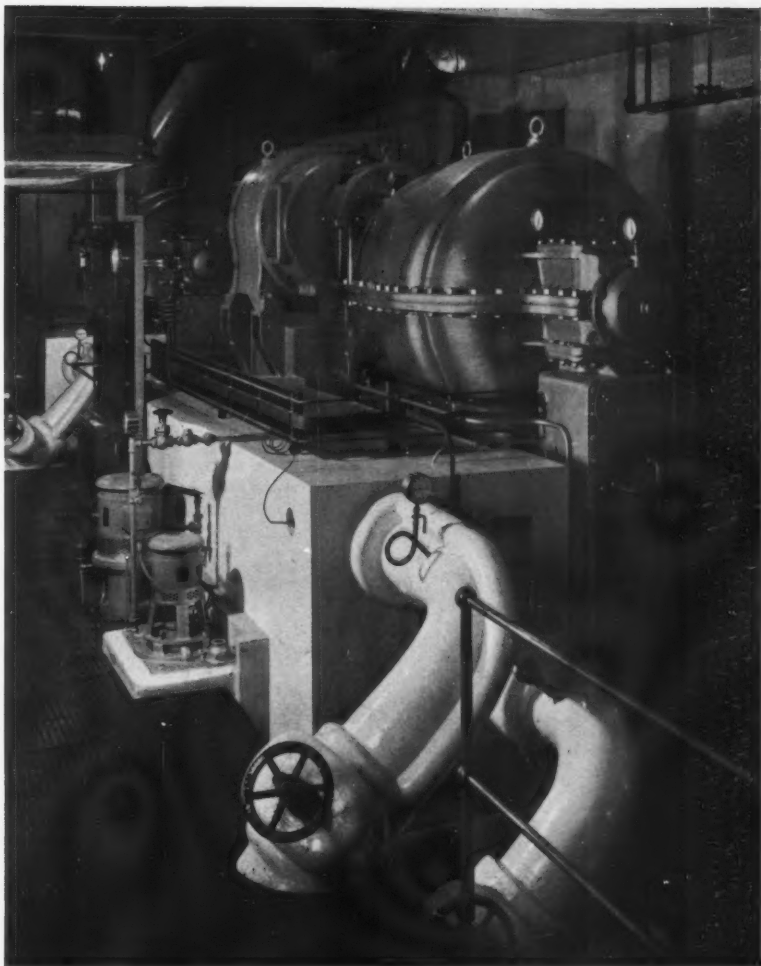
THE CUM B



Left, top: The foyer and bureau looking towards the kiosks and reception room. The decorations are similar to those described for the right-hand photograph on page 14. The scale drawing is of the foyer and bureau. The centre illustration is the Parlour. The wall panelling is in elm with teak capping and horizontal banding. Jarrah is used for the skirting and floor border. The wall features are pink fluted mirrors with gilt channels and plaster fans over illuminated glass trumpets. The screen and windows are pink acid embossed plate glass. The writing tables and chairs are in elm and teak. At the bottom of the page, on the left, is the Centre Court. The walls are panelled with Makore veneer and the door surrounds and skirting are porphyry. The floor border is golden tracertine. The general flooring is in ceramic mosaic of various colours. The electric wall brackets have glass rods and metal bowls. The glass rod cornice is illuminated with continuous sunray tubing behind. On the right is the telephone room. The entrance doors and cubicle doors are veneered with teak and supplied with metal kicking plates, handles and glazing frames. The cubicles are lined with grey opaque glass slabs. The floor is covered with a patent composition. On page 17 the plans, reading from left to right, are of the basement, ground and fifth floors. Below them, on the left, is one of the kitchens and, on the right, the centrifugal plant, with a capacity of 500 ice-melting tons, complete with all auxiliaries, and arranged in two compact self-contained units. These machines form part of the complete air conditioning installation for all the public rooms. The consulting engineers for the hotel were Reade, Jackson and Parry.



M. BERLAND HOTEL





1. Cloud Landscape over Loch Lomond.



2. Crail Harbour on the Fife Coast.



3. Old Houses and Toll Booth, Culross, Fife.

Scotland has produced shrewd business men of few words, able theologians of concise powers of argument, wordy novelists, abrupt ballad writers, and some of the greatest architects, who characteristically thought more about proportion and utility than they did about detail. The illustrations show the quality of this architecture of necessity. As John Buchan has said in his preface to *The Face of Scotland**, "I am glad that the authors have included a chapter on Scottish buildings, for Scotland is far richer in the handicraft of man than is commonly believed. In spite of the genial efforts of the reformers, it still contains some remarkable specimens of mediæval church architecture. Its little towns and villages may rarely be beautiful as a whole, but nearly all of them offer fine things, and one or two, like Culross, are as perfect as any Cotswold hamlet. It can show—especially on the Don, which is the Scottish Loire—examples of what the Scottish baronial style can be when it is used to its proper purpose, and, to come to a later date, it possesses a group of noble houses by the father of the Adam brothers and one or two by the brothers themselves. Scotland was always too poor a country to have much money for the amenities, and too disturbed to have much leisure for them, but what remains of the older art is often to a high degree idiomatic and revealing." But *The Face of Scotland* does not confine itself to architecture, and even to architects

**The Face of Scotland*. By Harry Batsford and Charles Fry. London : B. T. Batsford Ltd. Price 7s. 6d. net.

The Scottish landscape 1, which depends more on form and colour than on elaboration of detail for its appeal, is responsible for the rock-like quality and insistence on the beauties of proportion which distinguish the architecture of Scotland from that of the other Celtic races. The Cornish, the Bretons, the Welsh and the Irish seem to have had no sense of form such as is inherent in Scottish architecture. From the unknown builders of the Scottish baronial castles to the severities of the Adam Brothers, Playfair, Hamilton and Greek Thomson, Scottish architecture has reflected the dour characters of its creators and the bleak exposure of its surroundings. The final phase of Scottish architecture, after a regrettable romantic period typified by Balmoral, was in the work of George Walton and



4. Neidpath Castle and the Tweed near Peebles.

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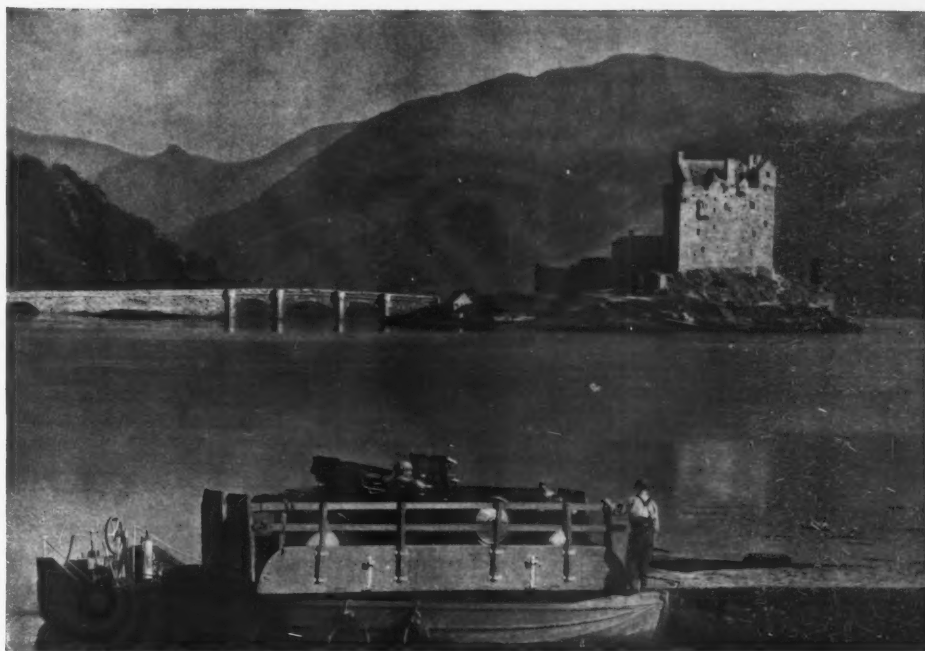
A PICTORIAL ANTHOLOGY

its appeal will be mainly on the scenic side. Those who look at the 116 illustrations, the majority of which are full page, and who are riddled, as people so often are, with an anti-Scottish prejudice, will be bound to admit that the scenery of Scotland exceeds that to be found anywhere else in Europe. The excellent and romantic photographs show mountains more shapely and more varied than those of Switzerland, valleys as lush and sheltered as those of Devon, lochs and coastal scenery unequalled even on the west coast of Ireland. One thing the book lacks, which not even the direct and admirable writing of the authors can give it, and that is the changing colour of the skies and landscape of Scotland throughout the year. The book conveys more than any other on the subject I have seen, "the freshness of the Highland early summer among the sweet-smelling hills." For those who know Scotland it is an invaluable and amazingly inexpensive anthology of Scottish scenery, and for those who do not, it is the best inducement to visit a country whose pictorial qualities can never be over-rated.

ARCHIBALD OLDYS

Charles Rennie Mackintosh, in the unbroken surfaces of whose buildings and severity of whose furniture and fenestration one finds even more of the true Scottish baronial spirit than in the more romantic restorations and creations of Sir Robert Lorimer.

Familiarity with such scenes makes the harbour of Crail on the Fife coast 2, seem mean and unpretentious despite stepped battlements on some of its seventeenth-century houses, but the solidity of its buildings is typical of a Scottish seaport, and would never be found on the coast of the Mediterranean or even on the flatter shores of the Baltic. Frequently the very hardness of the material forbade any elaborate detail; and the toll booth with its adjoining houses at Culross, Fife 3, show the sparseness of any exterior detail. The peculiar height of early town houses in Scotland is due to the fact that many people had to be accommodated within the comparatively small area enclosed by fortified town walls. The over-romanticizing of the Scottish baronial style not only, alas, in Scotland but also on the outskirts of London and other large cities, has prejudiced popular opinion against that most magnificent of all native styles. Neidpath castle on the Tweed 4, and Eilean Donan castle on Loch Duich 5, this last situated in one of the most beautiful pieces of scenery in the world, are excellent illustrations of the manner. When the enlightening influence of the eighteenth century broke down many of the tribal prejudices of Scottish life and the towns spread outwards instead of upwards, Scottish architectural talent found full scope in the economy of the later Georgian architecture. Inveraray on Loch Fyne, Argyllshire 6, though it has been much spoiled in the nineteenth century, still retains a simple Georgian spaciousness, while Edinburgh 8, so rightly called the Athens of the North, contains the best specimens of the Chambers Roman and Thomson Greek revivals to be seen in the British Isles. Edinburgh is, in fact, despite the havoc that has been wrought by the Victorians in Princes Street and the exaggerated admiration for "quaint bits" in the old town, about the most beautiful city in the world. (All the illustrations on these two pages are taken from "The Face of Scotland.")



5. Loch Duich, Eilean Donan, Castle Donie Motor Ferry.



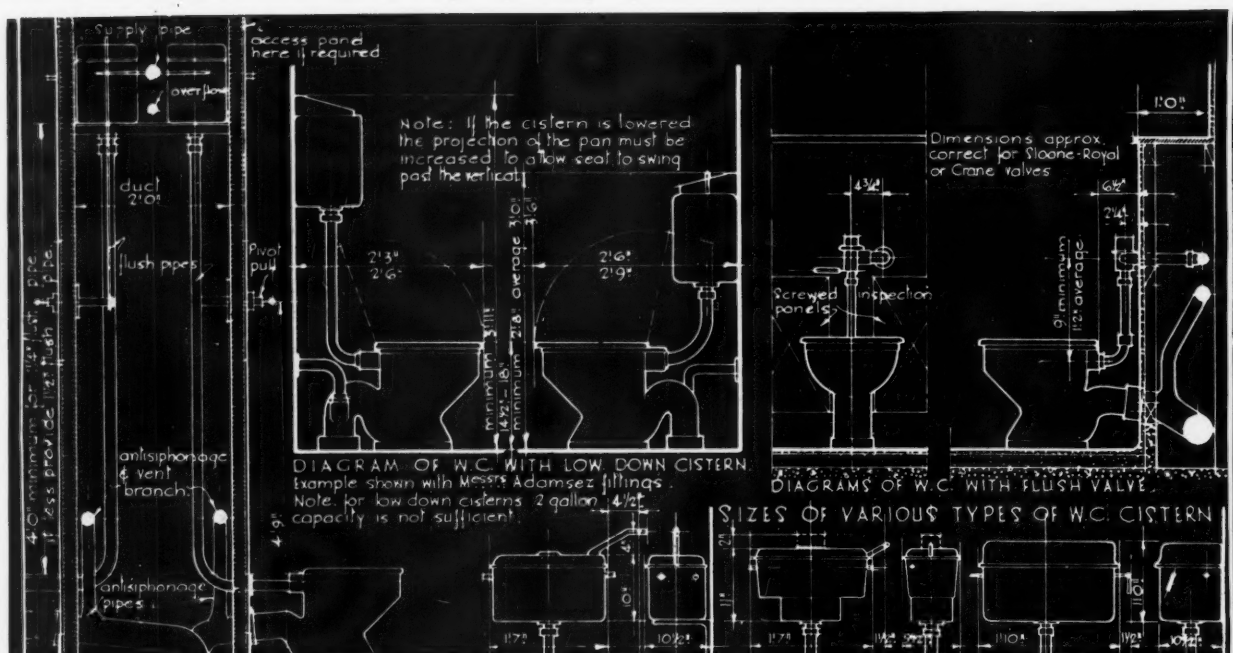
6. Inveraray and Loch Fyne, Argyllshire.



7. Scottish Baronial (nineteenth-century brand)



8. Classical Edinburgh; Waterloo Place.



Part of the plate on Plumbing to, and sizes of W.C.'s and Cisterns, etc., reproduced from *The Information Book*.

Book of the Month

Building Science in a Nutshell

By E. MAXWELL FRY

THE INFORMATION BOOK of Sir John Burnet Tait and Lorne.
London: The Architectural Press. Price 25s. net.

IT is with a feeling of intense gratitude that an architect takes up, if not seizes upon, *The Information Book*. How to come by the body of knowledge which an architect practising within the complicated organization of contemporary urban life is, as Mr. Christian Barman says in his Foreword, surely the most pressing of all the problems set to the architect of the nineteen-thirties.

We have indeed felt the lack of *The Information Book* these many years. Attempts have been made to compile information in some sort of easily accessible order, but always the problem has been seen as limited by the printed page, which is extraordinary in men who spend so much of their time on the drawing board. Of course, we see now that the only method of presenting information to architects is by means of diagrams. Carpenters explain themselves with pencil on board, slaters with a sharp point on slate, and architects surely with a pencil on paper. But being men of exactitude they will go further, to set forth exactly and to scale things which cannot be explained by word of mouth, or in print.

This is the sort of thing that used to happen. "How high should I make a hand-basin?" "Oh, about 2 ft. 6 in. I think . . . any way, I know it is not more than 2 ft. 8 in." "Well, let's try." Then there followed a little scene, set

round the old, badly designed, awkwardly placed basin in the office lavatory, with some work with foot-rules in and out of that apartment, so that somehow or other the basin was put in at a height varying within the limits of haphazard reckoning. Such scenes multiply themselves, even in the offices of the mighty. Nor can it be otherwise when manufacturers often decline to address themselves through their catalogues to the man at the board, and are sometimes even more haphazard than architects in the provision of essential information. But even if manufacturers were models they could not hope to encompass compactly the limitless range of subjects upon which an architect and his draughtsmen require instant and accurate information. We are driven to attempt some system of our own, and only too often the attempt fails miserably, and we must fall back on all too inadequate sources, involving us in continuous waste of time. *The Information Book* stands out as the only one successful attempt to meet this vital need in practice. It was evolved in the spare time of the very highly organized firm of Sir John Burnet, Tait and Lorne, and had it been born in a less well organized office it might very easily have died young. But planned from the beginning and put under the control of one man, it grew to something which is as near perfection as we can look for in a changing world. One expects that the sheets which are contained within the sparkling black rhodoid covers of this book will be still multiplying themselves, and undergoing a process of continuous revision within the offices of their authors. Others will remain for some time only too happy with what the book provides in its one hundred and forty-seven plates covering the range of building data and information, and fifty-four pages that set out with such admirable clarity the organization of an architect's office today.

The spiral wire binding is strictly practical. This is the only type of bound volume that will lie flat on the table and still remain intact.



CONVOLUTIONS IN CONCRETE

A study by Moholy-Nagy in the chance juxtaposition of large pre-cast sewer sections thrown down on a trenching site. Probably few enthusiasts for "the logical forms" of reinforced-concrete have realized that it also possesses an impeccably abstract, but quite unfunctional, beauty. In the almost classical formal pattern of highlight and shadow, tone and texture, space and surface, captured in this enlargement, we have an admirable example of that significant selectivity by which the eye of genius can raise "straightforward reproduction" to the level of creative art. There is no inherent superiority of a manually-guided brush over a mechanically-operated shutter, a delicate palette to a delicate lens. Both are just tools, banal in most hands, inspired in a few, for widely different purposes.

PLATE iv

January 1934

the architect at the MOVIES

Francis Bruguière has been in New York discussing, with Norman Bel Geddes, a series of short films. Financial collapse of a continent swept away the film project. Certain souvenirs remain, such as the skyscraper photographs reproduced in illustrations 1 and 3. These photographs by Mr. Bruguière

serve to remind picturegoers what we miss architecturally in movies—the tops of sets. Interiors, for practical reasons of lighting, are nearly always built without ceilings. Yet, what patterns are missed, not only visually but emotionally. There are mental games (lying on a sofa and gazing up) which one plays with ceilings that become chess boards, there are moments when a ceiling may become the retina of a great eye, there is the flight when we gaze at the cathedral roof. With modern studio lighting and modern superspeed stock, there is really no excuse for the art director who never allows for even part of an occasional ceiling. Exterior sets are as wilfully misconstrued. In the early days the art directors would only

build the lower sections of sets representing exterior buildings, the rest would be supplied by painted glass placed in front of the camera lens. Such a harmless deception, however, limits the thrill of such angles as Bruguière has chosen when buildings are shafts of white threat and whole blocks of houses sink in darkness. Because the early glass attempts were ineffective, producers began to believe that the tops of buildings add nothing to the drama of plot. But look at the drama in Bruguière's photographs! It would be practical for directors to have models of buildings and combine characters with the Dunning process—if they would take the trouble! Model buildings, too, suggest occasional architectural flights of fancy. A building could be introduced in the fourth dimension, that is, it could be made to move in time, or breathe, by rhythmically tracking the camera backwards and forwards on the model. Perhaps such a suggestion is of most value to the architect who is himself an amateur film producer! Indeed, the architect film producer might well leave real buildings to Hollywood, and, as a *jeu d'esprit* and for intellectual stimulation, produce entirely hypothetical buildings. For instance, the centre of gravity might be imagined exactly in the centre of the model so that towers could grow out in all directions!

Illustration 2 shows a gigantic set constructed for F.P.I., the new Ufa talkie which is about a mysterious air station in mid-ocean. This is one of the few recent attempts at set construction, outside the studio, on an impressive scale.

OSWELL BLAKESTON



A Free Commentary

By Junius

BECAUSE the memory of the dead, even of the distinguished dead, lasts so short a time in these crowded days I make no apology for recalling here, some three long weeks after her passing, the name of Stella Anderson—Stella Benson. Those who besides savouring the subtle, highly individualized quality of her work, had the privilege of her acquaintance, enjoyed the quiet gracious friendliness of her approach, her delicate wit, the originality of her viewpoint. But the outstanding quality which extorted admiration was, I think, the really superb courage with which she faced and conquered life, always handicapped by the threat of serious illness, and increasingly of later years by the dismaying disability of deafness. A truly great spirit inhabited the frail shell which now lies buried in a Chinese grave.

In these random notes some months ago were summarized certain horrifying conclusions of a distinguished Swiss chemist as to the effects of poison gas in war. The impressive thing about them was that they were (or professed to be) derived from actual experiment made on living bodies with a gas which was perfected by the end of the Great War. Gases much deadlier in their nature and sure in their operation are now, it was asserted, available. In the brief debate in the House of Lords on Lord Allen of Hurtwood's motion for papers as to the intentions of the Government in regard to the future of aerial defence and attack, Lord Mottistone, a gallant soldier of ripe experience, gave their lordships to understand that dangers of gas-attack by air had been ludicrously exaggerated. The incendiary bomb is, in his lordship's opinion, the more formidable weapon. If the wind were in the right direction. . .

No reasons were offered beyond a perfunctory reference to the perfectly well-known difficulties of applying a given gas to a given pair of lungs—which may be on or under or above the ground. It is a pity that no authoritative and independent examination of this important question can be undertaken. It is not possible to accept the unsupported *ipse dixit* of anyone, however experienced, distinguished or honourable. The higher interests of patriotism are now universally held to justify concealment or manipulation of inconvenient facts, and it is more than possible that those who are quite honestly convinced that increased preparation for war, for defence, that is, of course, is necessary, are anxious to minimize the horror (and futility) of modern war weapons lest the feeling against war which is obviously fast gaining ground should sterilize efforts for reasonable defence. It is, of course, equally true that deliberate exaggerations of the effect of those same weapons would be held to be justified by members of the opposing school. The matter is, however, too serious to admit of discussion by statement and counter-statement.

And it would appear that just after the war Field-Marshal Foch and the then Major-General Seely were discussing with the serene professional detachment characteristic of gallant soldiers a possible war between their two countries. The Englishman suggested that the French could make a pretty mess of London with their aeroplanes if so disposed. But then, said the Frenchman, the English could do the same to Paris. Each could injure the other so much in fact that the attack would never be made by either. . . . But is that really the way people argue when they are conducting a war? We may well doubt whether what the soldier said is evidence.

If you come to think of it, the argument has a strange double-faced appearance. Attack by aeroplane is not so bad as all that. So don't panic. Attack by aeroplane is so bad that it will never be made.

I would take occasion to mention that an abstract from Mr. Beverley Nichols's "Cry Havoc!" under the brilliantly apposite title "Lord Beaverbrook is too busy" is now issued in pamphlet form by Messrs. Cape at threepence. The value of this is quite independent of the question whether the author does or does not take an exaggerated view of the poison gas menace. It depends on the fact that the newspaper magnate, having accepted a challenge to answer a few pertinent questions submitted by Sir Norman Angell, bearing on certain implications of the policies which his lordship was advocating with such eloquence, ran clean away from the challenge when he saw the questions, on the ground that he was too busy to answer them.

Newspaper proprietors who are too busy to write have obvious opportunities of doing their writing by proxy and it must be supposed that all his lordship's henchmen are also too busy. Which is really a pity, as Sir Norman Angell, who has written much on matters of foreign policy, has never compressed his meaning into fewer or better chosen words, and an effective answer would have put a stop to all his nonsense. But Lord Beaverbrook is still too busy.

I cannot pretend that the demand for the 24-hour clock, however reasonable in itself and advisable as a step, however small, in the direction of common international practice, is one of the burning questions of the day. The Astronomer Royal and Mr. Frank Pick (reported in the brief debate in the Lords as Mr. Frank Dick—*The Times* used not to make these little jokes) have been writing in its favour. To hear the opponents of the idea you would not guess that it was an idea that had ever been tested; or, alternatively, that English people were so incurably dense that only complicated subtraction sums done with pencil and paper would enable them to realize that 19.30 was 7.30 p.m. We are reminded, too, in this connection that England is an island—independent of continental vagaries and all that—which makes one feel that the measure ought to be positively pushed through at once.

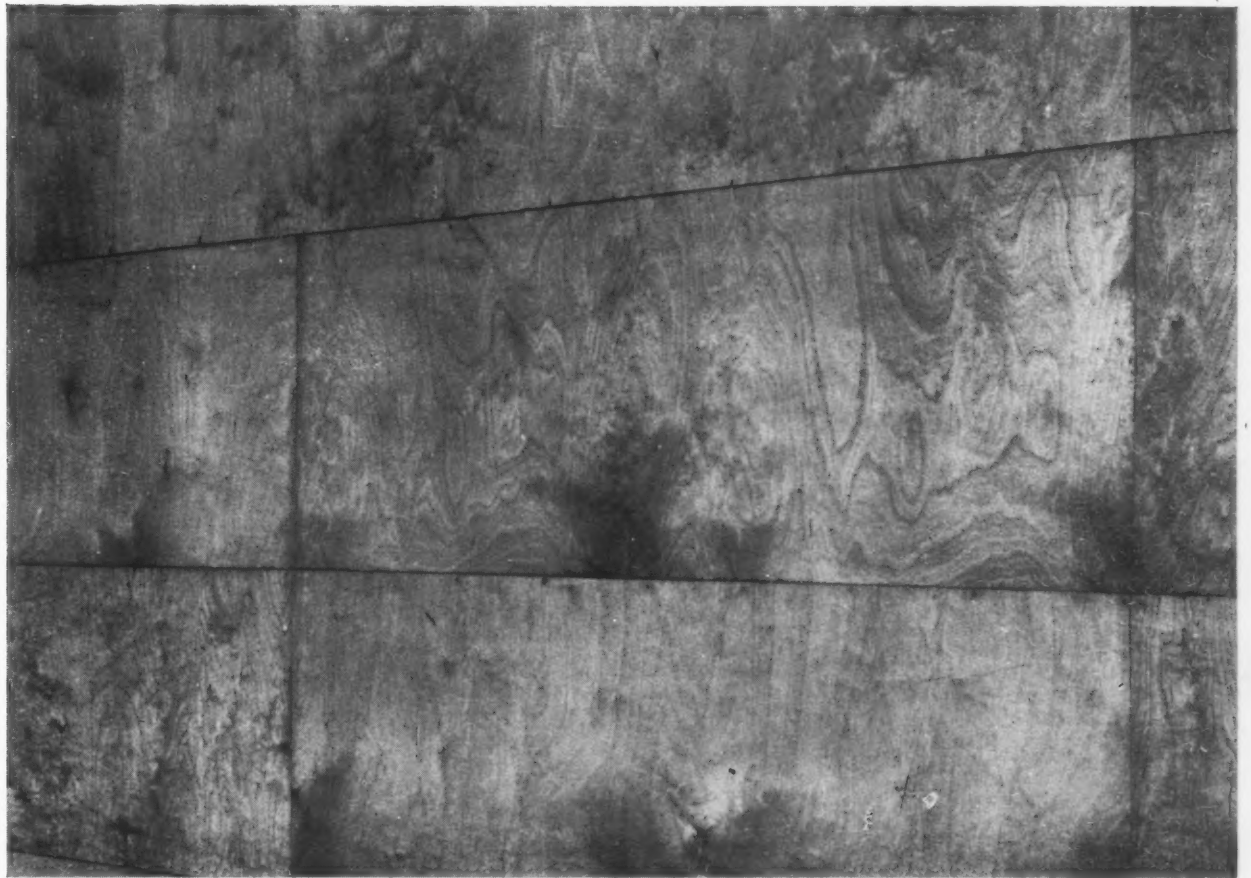
English as she is wrote: In a circular letter signed by a secretary with an honourable military title. "In sending you herewith an abridged report, etc., of our old-established work . . . I sincerely hope you will be pleased to peruse same and find interesting. As we are really in most serious need, causing great anxiety, will be exceedingly thankful for any help, however small, you may feel inclined to send us. A splendid work is in progress and much good being accomplished, assuring you of our deepest gratitude for a favourable reply."

Overheard on a country railway platform: "Oh, what was the name of that novel you recommended me? Appleyard?" "No, Abelard, darling. Frightfully fascinating."

Overheard at a dinner party, in reference to exhausts: "Oh, no, it's not the extra power. There's nothing in that. It's the glorious rattle you get out of her, especially in town, with the echo from the houses!" I am a guileless man, and didn't know there really were people like this.

Things we should like to know: Who was the official of H.M.'s Office of Works who painted an embassy of ours in a gay and distant land more or less all over inside and out with battleship grey paint, carefully conveyed by sea and land a thousand miles and more? H.M.O.W. has a longer arm than we realized.

WALL SHEATHINGS



A detail of the birch and armoured ply grille for ventilation in the rest room of the Parsonage Colliery, Leigh, Lancashire.

THE ARCHITECTURAL REVIEW
DECORATION AND
CRAFTSMANSHIP
SUPPLEMENT

January 1934

"There is no law, no principle, based on past practice, which may not be overthrown in a moment, by the arising of a new condition, or the invention of a new material."

JOHN RUSKIN
Seven Lamps of Architecture



Some Wall Sheathings

By FREDERICK GIBBERD

THE business of an architect is to organize space. In a habitable building he does this with vertical and horizontal planes. In the architecture of tradition these vertical planes, or walls, were weight supporting. Today, not only do they carry no weight, but they are themselves supported by steel or concrete frames. This is significant, for the traditional wall had a vertical gravitational tension, whereas now there is an apparent even tension in all directions. The wall has become a taut skin.

We are here concerned with the materials used for sheathing this crude skin, or curtain wall, and with those materials whose nature is such that they will form both curtain and sheathing, without the necessity of applying a decorative finish of any other material.

If the sheath is to display the true character of the core, it must have an apparent even tension in all directions: consideration will, therefore, only be given to materials with a continuous flat surface, that in no way give an impression of mass.

We shall be limited, further, to materials that are pre-fabricated and erected on the site in a dry condition; for their rapidly growing importance is a sure indication that, one day, they will supplant those used in the wet process. They must do so if building is to be quickened up by standardization and organization.

WITH the removal of weight from partitions and external walls came a reduction in thickness of material, with a consequent loss of sound and heat-resisting qualities. This led to a desire for a new basic material for the core, or a special sheath, to counteract this loss.

In the case of sheathing,

Wall Board

with its high thermal insulation and acoustic properties, is meeting that demand. Further, through its exact constituents and nature being known, accurate research tests can be applied which will allow the living conditions of a room to be predetermined.

Wall board has been on the market some twenty years, but in this country there was little intelligent use of it until the advent of Broadcasting House. This building might be called a landmark in the history of synthetic facing materials, particularly in the case of wall boards. The acoustic problems solved, the exploitation of a diversity of surface textures without their being mutilated with decoration, and the ingenious, fixing

devices, invented so that the board could be used in simple continuous surfaces and not split up into traditional panelling, all demonstrated to architects and manufacturers that wall board is something more than a glorified cardboard, useful as a cheap substitute to wood panelling.

The basic material of wall boards is either cane fibre, root fibre, wood fibre, wood pulp or asbestos, and the methods by which the board is produced vary with the different manufacturers, each of whom claims their product has unique and enviable qualities possessed by none other. There is a quantity of "literature" on the research tests carried out on the different boards; unfortunately, the lack of standardization in the methods of testing, and the testing apparatus of research authorities, makes it extremely difficult to make an accurate comparison.

Few wall boards can be obtained in sizes greater than 14 ft. by 4 ft., and the diversity of methods devised to solve the attendant jointing difficulties are too familiar to bear recapitulation. Sufficient is it to mention that the practice often advocated, of covering the joint with tape and finishing with a plaster skimming coat, is most illogical as the wet process thus introduced nullifies the advantages arising from a dry one.

Building operations are often expedited by using plaster boards in lieu of ordinary slow-drying plaster. Plaster boards consist of gypsum plaster sandwiched between two layers of paper which is turned over the edges and sealed. They are made up to 10 ft. long by 4 ft. wide and from three-sixteenths to a quarter of an inch thick. Jointing difficulties are overcome by finishing with rough plastic paint or a plaster skimming coat, which has the disadvantages already mentioned.

Alvar Aalto's furniture at the Finnish Exhibition last year was so exciting that the other exhibits were rather overlooked. Amongst these was a new

Flexible Wall Board

which solves all jointing and bending difficulties by being in sheets large enough to cover a complete wall in one clear surface.

The board is either corrugated or smooth, has a thickness of one-sixteenth of an inch and is supplied in rolls 10 ft. wide by 100 ft. long. It can be applied to brick, stone or similar materials, and, considering the huge size that can be dealt with, fixing is simple. Briefly, this is as follows: first, the board is cut to the full dimensions of the wall; the whole surface is evenly moistened with water, re-rolled and left for about two hours. The roll is then stood on end in one corner of the room, and the actual fixing is done by tacking the board at the top and bottom edges to wood members of plugs as it is unrolled on the wall (page 34). The skirting covers the bottom row of tacks, while a cover strip is provided to hide the upper. It is also possible to glue the entire board to the wall. In

drying out the board becomes quite taut and after the edges are trimmed it is painted, distempered, or left in its natural state.

From boards with definite acoustic properties we will turn to those that are specifically fire-resisting. The basis of most of these is

Asbestos

and the quantity of this material in the board decides to what degree it will resist fire. For instance, the most fire-proof board—used in factories where explosions may occur—has an asbestos content of about 87 per cent., making it absolutely fire-proof; while a wall board containing 25 per cent. asbestos can only be termed fire-resisting.

The thorough research carried out by the manufacturers has made available such variations in the finish as: hard glass-like surfaces in various colours and designs for positions where impregnability is called for; synthetic plaster surfaces, stippled in colours; synthetic silicate surfaces in representation of marble, and indented surfaces, very similar in appearance to plastic paint, obtained by tamping the back of the sheet in moulds.

In spite of the reverence paid to Tudor and similar archaeological reconstructions,

Plywood and Laminated Board

have sounded the death knell of the panelled room. Natural wood is liable to such shocking behaviour that even sentiment will not save its substitution by a material that can have all its intrinsic beauty, with none of its defects.

Plywood consists of veneers of wood with the grain at right angles, bound together with waterproof cement. It is obtainable in thicknesses from three-twentieths of an inch to seven-eighths,

and up to seven by four feet in size. Sheets as large as this require careful fixing or the continuous balanced struggle between one veneer and another will collapse and the board will buckle.

For walls of large area, laminated board, through its core of strips being at right angles to the surface, is a stronger and more reliable sheathing. This composition is rigid enough to form a free standing partition, which is particularly interesting for, both skin and sheathing being in one unit, the only work on the job is a mere matter of screwing at the top and bottom to wood grounds. Furthermore, by cutting away the building board at the edge of the sheet and inserting a hard wood ground to act as a tongue, the sheets can be built up into homogeneous surfaces of indefinite size. These boards are obtainable in lengths up to 16 feet and widths up to 6 feet.

Jointing difficulties between sheets of ply can be overcome by the use of

Veneers

which, being so thin, allow butt jointing with only a hair line showing, or an insertion of strips of veneer over the joint. The cheapest and consequently most popular type of veneer is the peeled, or rotary cut, which can be obtained in almost endless sheets. The great variety of veneers obtainable can best be studied in the well-produced catalogues of the various manufacturers.

For purely decorative purposes, veneers can be obtained on a paper backing for applying like wallpaper; and a tea shop at the Marble Arch is panelled with veneers of different interweaving woods produced by a patent process. According to the makers, there is no limit to its decorative possibilities.

For contrast we will turn from a material that behaves with light in one way only, to one that can do anything with it:



The locker room in the open-air baths at Wallasey has the walls and ceiling sheathed with plain asbestos, while decorated sheets of the same material are used for the doors.

SOME WALL SHEATHINGS



"Easework" stand at Olympia, 1932. The chaste simplicity of the black bakelite wall coverings is rather marred by the "arty" lamp-shade.

Glass

Much has been written lately on the creation of space by designing with light. Glass has the power to absorb, diffuse, refract and transmit light; and is, therefore, an ideal material for architecture.

Such forerunners as Paxton, Walter Gropius, Robert Vorhoefer, Mies van der Rohe and Lilly Reich have, with glass, introduced a new spatial relationship into architecture. The International Furniture Exhibition at Berlin in 1931 was conspicuous for its demonstrations of this new architectural experience. Perhaps the most lovely example being in the Lounge of a Boarding House, where a screen of black glass, stretching from floor to ceiling and arrested in space by its light thin frame, reflected the whole room in undertone. In England, black glass, having invaded the drawing rooms of Mayfair, is now used almost exclusively for shop fronts in the "modernistic" style.

Now that coloured opaque glass is being produced in this country, it has an increasing popularity. It is manufactured in a similar manner to roofing glass, but from different ingredients. Various colours can be obtained in pale and lovely shades; and its hard, non-

absorbent and consequently easily cleaned surface, makes it eminently suitable for bathrooms and kitchens. The standard panels vary in size from 15 in. by 10 in. to 21 in. by 14 in., and are fixed to brick, or cement screed walls by mastic putty.

Thanks to the development of such processes as etching, sand-blasting, engraving, brilliant-cutting and colour-



The staircase wall at the Cafe Schottenhaml, Berlin. A restless design in thin metal plates which is, perhaps, excusable in a cafe. Architect: Oscar Kaufmann.

spraying, the varieties of decorative glasses are infinite. Their architectural suitability is a matter of intelligent selection. For example, Paul Nash lined the bathroom he designed for Miss Tilly Losch with stippled cathedral glass, so that condensation would be invisible on its rough texture. Further, he introduced into the metallic purple general wall surface, small panels of peach plate mirror to give a contrasting cheery and warm reflection.

For purposes of sheathing, the brittleness of glass is causing it to have a serious rival in the new plastic materials. These may be described as those materials that take form by the application of heat, with or without pressure, and retain shape on cooling.

Of the three basic plastic materials, cellulose, synthetic resin and casein, the resin group is most used for sheathing. The main members of this group go by the difficult names of

Phenol and Urea Formaldehyde,

so difficult that they are usually referred to by their specific pioneer names—bakelite and beatl.

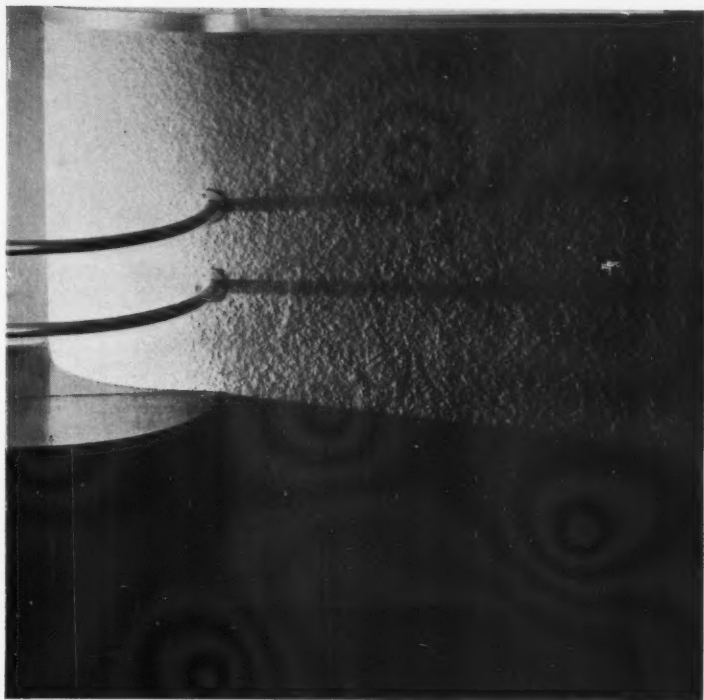
Both of them have the property of being non-inflammable, moisture and vermin proof, unaffected by organic solvents, and an insulator of electricity; furthermore, they will not chip, crack, tarnish or corrode and require nothing more than a damp cloth for cleaning.

The basic material for both groups is resinous powder to which is added fillers—in the case of beatl, wood sulphite, and bakelite, ground sawdust, macerated fabric or asbestos and ground pigment.

[Continued on page 33]



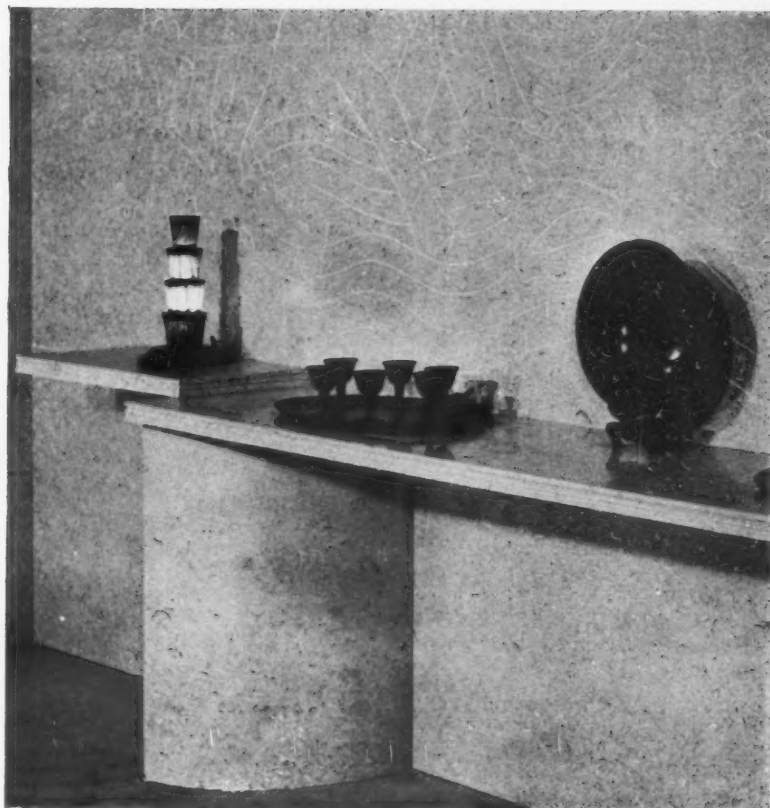
A detail of the hide that covers the walls of the living room in Peter Behrens' famous "mansion" in the Taunus mountains.



1



2



3

1. Rough textured wallboard in the Press Listening Hall at Broadcasting House, London. *Architect*: Raymond McGrath. *Craftsmen*: Trollope & Sons.

2. *Architecture Undecorated*. A nubilous onyx screen in juxtaposition to, and strongly contrasting with, a wall of transparent plate glass in the Tugendhat Haus at Brünn. *Architect*: Ludwig Mies van der Rohe.

3. The stone dining room at the Dorland Hall Exhibition, 1933. A 'close up' of the polished Portland stone wall sheathing—a new compact crystalline limestone, with a lovely fossil formation, discovered under the tiers of whitbed at the Portland quarries. *Architect*: Oliver Hill. The design on the wall is by Eric Gill. *Craftsmen*: W. W. Jenkyns and Company.



4

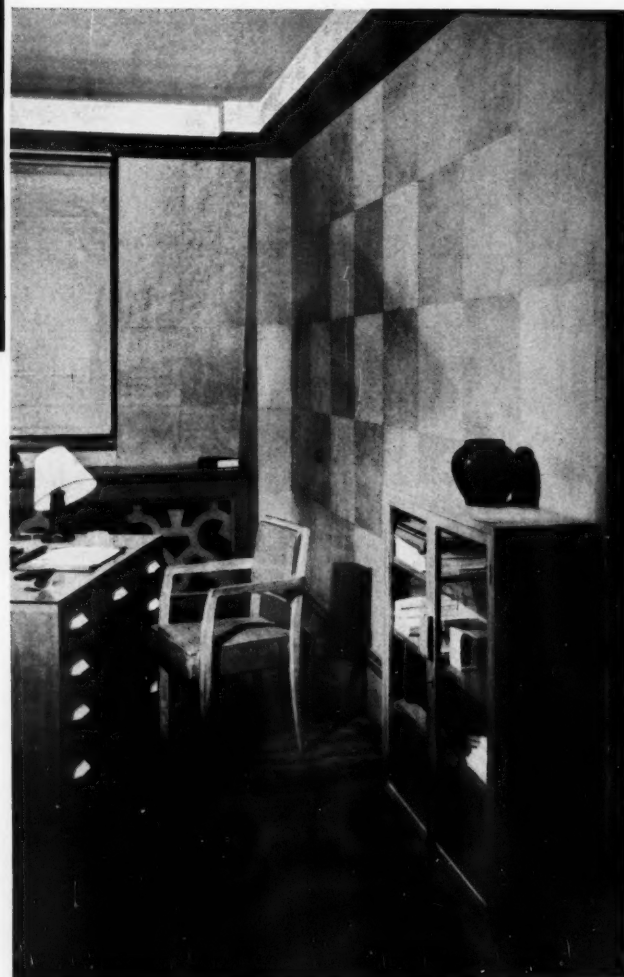
4. Radica wood used as a decorative finish to the walls of the lounge on the Italian liner *Conte di Savoia*. Architect: Gustave Pulitzer.

5. Ordinary birch plywood with the grain in alternate directions, in the secretary's office at Vintry House, London. Architects: Louis de Soissons and Grey Wornum. Craftsmen: Venesta.

6. A partition made by combining oak plywood

and a standard metal window section, with special arrangement for adjustment to uneven floors. Designers and Craftsmen: Venesta and the Crittall Manufacturing Company.

7. Panels of oak plywood, butt-jointed, form this dado in the window of the library at the Union Society, Cambridge. Architect: Harold Tomlinson. Craftsmen: Venesta.



5



6



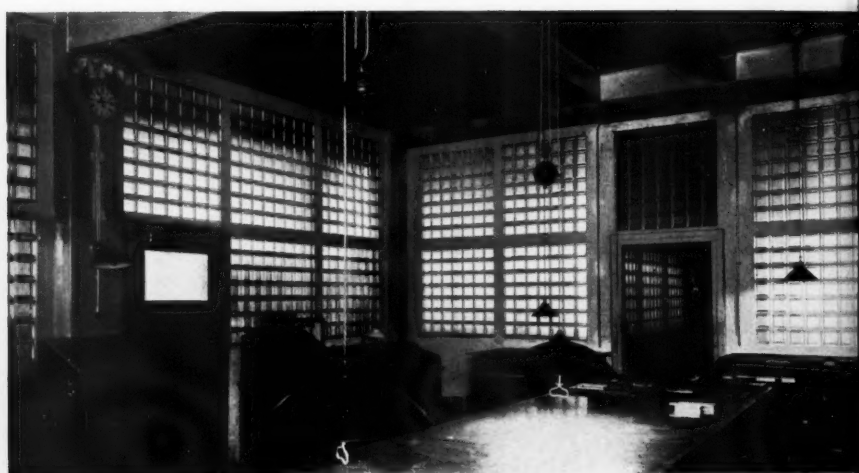
8. An intelligent use of glass at Broadcasting House, London. This small dressing room is doubled in size by the walls of black glass and mirror. *Architect: Raymond McGrath. Craftsmen: Trollope and Sons and Pugh Brothers.*

9. Walls of glass in a Viennese office building. *Craftsmen: Luxfer.*

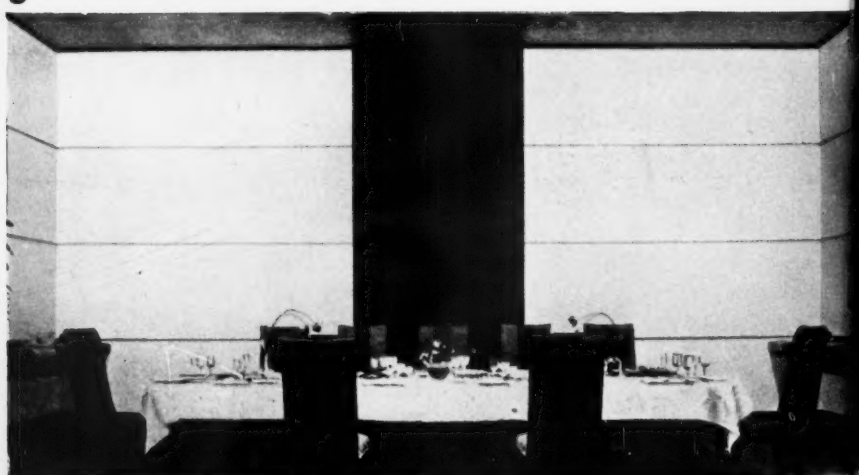
10. Opaque glass, used with dignified simplicity as a wall covering in a dining room. The sheets are of a suitable size for easy handling and are held in metal frames in the normal window-glazing manner. *Architect: E. Fahrenkamps.*



8



9

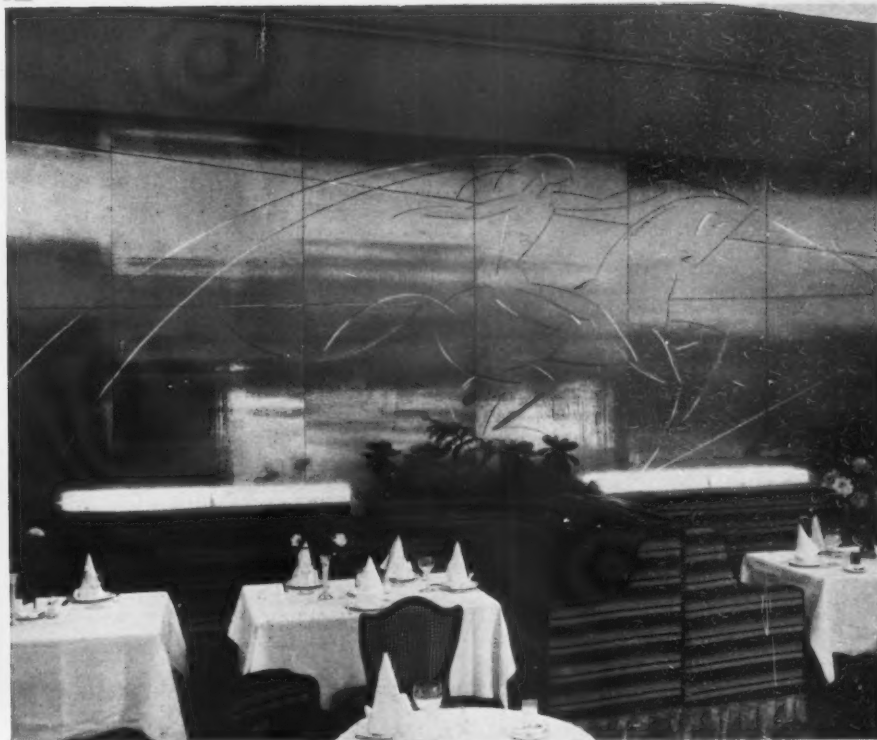


10

WALL SHEATHINGS



12

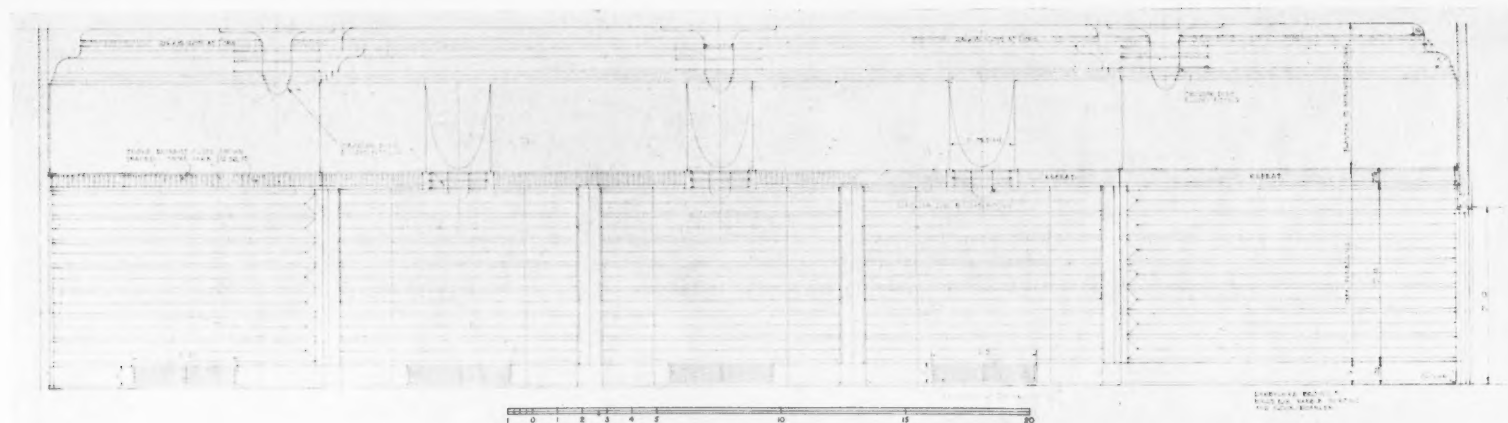


13

11. A waiting room in a hospital in Vienna. The walls are lined with veneered laminated board and rolled, rough-textured glass. The lay-light of the same type of glass is hung from the ceiling to provide day and artificial lighting. *Architects:* Juttman and Riss.

12. The glass ensemble at the Dorland Hall Exhibition, 1933. The curved wall is lined with $\frac{1}{4}$ " matt silvered plate glass of gunmetal tint. *Architect:* Oliver Hill. *Craftsmen:* Pilkington Brothers.

13. A ribbed wall lining of brilliant cut and polished glass at the Embassy Club, London. *Architect:* Raymond McGrath. *Craftsmen:* Trollope & Sons and Pugh Brothers.



14

The illustrations on this page are of rooms, etc., at the Cumberland Hotel, London, designed by Oliver P. Bernard.

14. Sectional elevation of the Study.

15. The corridor leading to the ladies' hairdressing saloon. The walls are lined with opaque glass slabs in grey with ivory capping. The door head is black. The doors and frames are teak veneered with stainless steel architraves, glazing frames and plates. *Craftsmen* for the doors, Sage and Company; for the veneers to the doors, William Mallinson and Sons; for the glass slabs, British Vitrolite Company.

16. The Study.—The walls are of solid weathered English oak, framed up and fixed in the old fashioned method. An interesting feature is the considerable length of solid oak used in each of the recesses. The metalwork on the entrance doors and on the service door is rustless hammered iron. The writing tables and chairs are of solid oak treated as wall panelling. *Craftsmen* for the oak, William Mallinson and Sons; for the wall panelling, G.T. Rackstraw.



15

17. The Carlisle Room.—The wall above the dado is veneered with weathered sycamore in vertical plank formation, enriched with metal inlay motifs and circular vent grilles. The entrance doors and frames are similarly treated. The dado is of cedar onyx marble, dull finished. The skirting and floor border are in porphyry. Continuous soffit boards, coloured glass rods and slats illuminate and run the whole length of the room. *Craftsmen* for the wall panelling and doors, Hampton; for the veneers, William Mallinson and Son; for the metal vent grilles Comyn Ching; for the illuminated glass troughing, The General Electric Company.



16



17

32

This mixture is placed in a mould and subjected to pressure at a high temperature. The bakelite has dark resins which restrict the colour range and it will not take a high polish as will the beatl.

Raymond McGrath made charming play with delicate coloured

Laminated Sheets

of the beatl group in his Dance Band Studio at Broadcasting House, London; and at the Cumberland Hotel the tops of the furniture were covered with a laminated board that has just been introduced to this country. The composition is of paper or cloth moulded under terrific heat and pressed into sheets. It is essentially a veneering material and may be obtained with cores of wallboard, plywood, asbestos, and metal faced plywood. The makers have devised an ingenious concealed fastener so that the sheet may be fixed with an uninterrupted surface. Colours and patterns, of which there are more than forty different kinds, are worked into the material in the process of its manufacture. The plain, polished and matt surfaces are very similar to the cellulose acetate sheets, exploited in the past with such charm by Walter Gropius.

A new process has recently been perfected for cementing bakelite sheets to plywood. Sheets of this material can be obtained up to six or seven feet long. The manufacturers of this new bakelite and plywood board are also experimenting with other surfacings to a plywood



Craftsmen fixing laminated resin sheets veneered to plywood, by counter-sunk screws.

base in order to obtain a wider range of colours.

It is the proud boast of the plastic trades that their materials can give an

exact representation of the more expensive natural ones—a feeling of lassitude and weariness descends when we think of how inventors must have dreamed

visions, hoped and struggled at the wheel of cross-purposes, only to have their creations thus mocked.

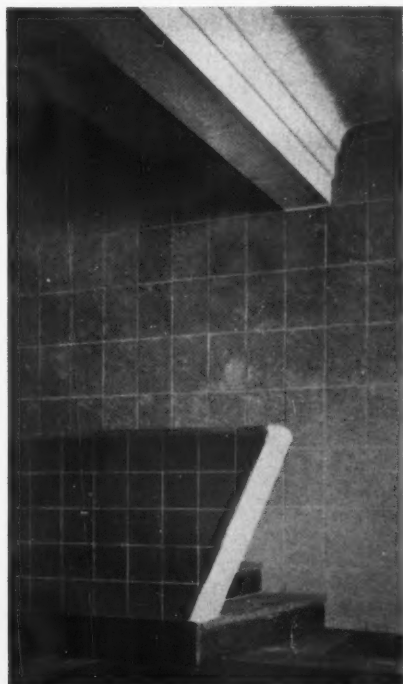
Although they are said to be synonymous with this mechanical era

Metal Sheathings

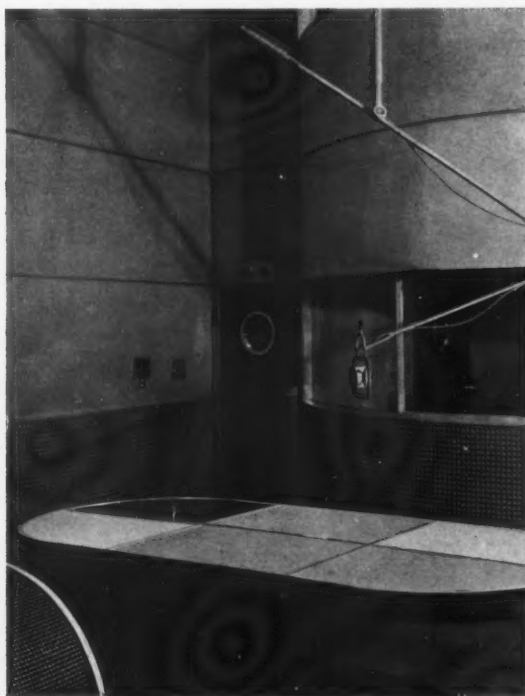
are rather restricted in use because of their high cost. Of plywoods faced with copper, stainless steels and similar metals, perhaps the best example is in the Vitamin Café in Oxford Street, designed by A. D. Connell (page 34), which is lined out in sheets of aluminium, fixed with cheese-headed screws.

Metal plates of copper, brass, aluminium, and steel cover the walls of the Café Schottenhaml, Berlin (page 26), while in England the Shakespeare Memorial Theatre has a pay-box faced with small plates of stainless steel with varying degrees of surface polish.

Metal surfaces may now be obtained by a new process called metallization, which enables any dry non-greasy surface to be sprayed



A detail of the tiled wall of the exit staircase from the Carter Tile and Pottery Showrooms at Poole, Dorset. The wall is covered with 8 in. faience tiles of a broken fawn colour.



An interesting use of rubber in the Dramatic Effects studio in Broadcasting House, London. The perforations are to prevent the acoustics of the material underneath from being affected. Architect: Wells Coates.

with metal. The method by which this is done is extraordinary. The metal is heated to a point of vaporization in a spraying pistol, projected on a blast of compressed air at a speed estimated at about 760 m.p.h. and at the same time cools it so quickly that the hand can be held in the spraying flame, four inches from the mouth of the pistol. Although the metal can be sprayed on to any required thickness, one hundredth of an inch is sufficient for normal wear and tear.

There are various metal-faced papers on the market, but these cannot be discussed as they are a purely decorative medium.

Tiles

Tiles are too well known to require a detailed description. They are ideal for all those positions where maximum hygiene and permanence are essential.

It is said by some so-called "modern" architects that the joints in tiling reduce the scale of a room. Rubbish. If tiles are well laid, their joints make a continuous surface pattern like the texture of a fabric. True enough, joints will betray a poor architect, for unless they are worked out in the preliminary stages of the design there are bound to be odd tiles cut to special sizes.

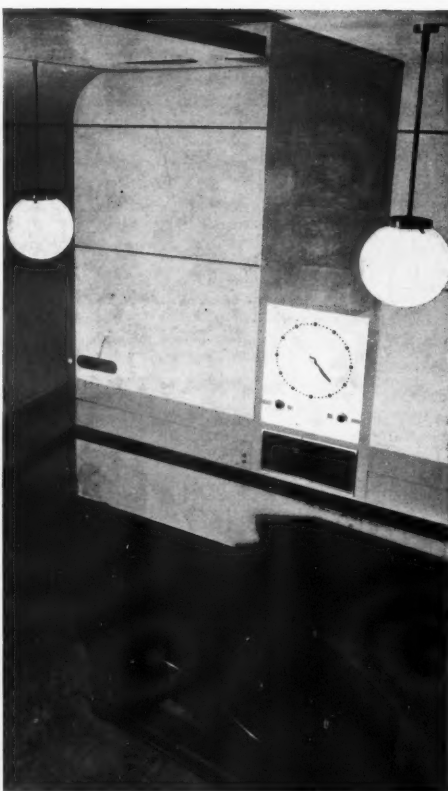
Mention must be made of the new glass tiles, which have designs fused on to them; and of a new hollow tile partition block glazed on one or both sides. The significance of the latter is that being both core and finish in one unit, building operations are cut down to a minimum.

Rubber

In positions where hygiene and resilience are desired, sheet rubber, to R.G.A. standard, of a thickness not less than two-sixteenths of an inch, is very suitable. It can be fixed to any reasonably smooth surface with rubber solution. The adhesive is coated both on the wall and on the sheet and, just as in mending a bicycle tyre, it must be left until it is tacky before the two surfaces are brought together.

Most of us, in the dim past, have played with plasticine and found how easy it was for the fresh, bright colours to get mixed together making a horrid grey mass, streaked with dirty colours. Effects such as these are, at the moment, in favour, as on their mottled surface dirt cannot be seen.

Interesting use was made of rubber in the Dramatic Effects studio of Broadcasting House (page 33), where it formed a dado to act as a cushion against knocks. The



Coloured resin sheets giving decorative contrast to the general wall surface of untreated building board at Broadcasting House, London. Architect: Raymond McGrath.



Walls sheathed in aluminium at the Vitamin Cafe, Oxford Street, London. Architect: A. D. Connell.

rubber was perforated with holes about $\frac{1}{4}$ in. diameter so that the absorbing properties of the acoustic material it was mounted on would not be affected.



Another unusual use of rubber is in sound-proofing walls by the thick cellular air-cushion variety, which, incidentally, is also used to line padded cells.

Where expense is limited, lino or cellulose linerusta might be substituted for rubber as it has the same hygienic qualities, but not, of course, the resilience.

In the entrance halls of public buildings and like positions where durability and long life is required,

Reconstructed Stone and Marble

are often used in place of natural materials as they are said to have all the latter's advantages with none of their shortcomings.

The veneers are seldom thicker than 2 in., and the joints should, of course, be treated frankly as a pattern so that they will not give the feeling of a third dimension, which arises from the traditional cut block masonry.

Tacking a roll of flexible wallboard along its top and bottom edges.

ANTHOLOGY

J. N. COMPER SPEAKS— AFTER FORTY YEARS

... The answer is best found in the speech of Socrates in Plato's "Banquet," which is familiar to everyone but which I quote as I first knew it as a boy in an edition of 1846 of Dante's "Vita Nuova" with a translation by Joseph Garrow: "a man should," it runs, "from his youth seek for forms which are beautiful. At first he should love but one of them; then recognise the beauty which resides in one as the sister of that which dwells in the other. And if it is right to seek for beauty generally, a man must have little sense who does not look upon the beauty of all bodies as one and the same thing." At first, that is, he seeks "in youth" for unity in beauty by exclusion and he ends by finding it by inclusion. What had intervened was a lesson like that of the vision given to St. Peter on the housetop at Joppa—a vision first vouchsafed in the National Museum in Rome and repeated in Sicily and Greece between designing the two churches. It was the discovery that here by the Mediterranean in the museums of Rome and Sicily and amongst the ruins of Greece are to be found the same mouldings of architecture, the same turn of folds in the draperies of statues and the identical lines of decoration as in East Anglia. It was like finding the English primrose on the Apennines, and mixed with the blue Greek anemones on the slopes of Taygetos.

"All places that the eye of heaven visits

Are to a wise man ports and happy havens."

This is the experience I wish for all ecclesiologists, so that we may have no more of a still prevailing insularity.

* * *

It is true that all the greatest works of architecture have not only the stamp of individuality, but more or less of nationality in the sense that they belong essentially to the country in which they are found; but they all spring from the same source. Perhaps there are no more beautiful remains of architecture in the world than Tintern Abbey Church and nothing more characteristic of England in the Gothic middle age, yet Tintern is so free from any mannerism and of the fashion of any period as to stand almost by itself, like the Parthenon in Athens, and thus to transcend nationality and belong to all places and all time. But it is from the Mediterranean that I would draw instances of the supreme embodiment of a transcendence above nationality which ought to be ours today when, if we have lost the intercommunication of crusades and of Pope and Emperor, science has given us physical means of intercommunication which, under Providence, must surely lead to a more real unity.

The first example comes from Sicily under the Norman kings of the twelfth century. The Court of Palermo embraced not only Western Christendom but the Eastern Church and even stretched out hands to Persia and the highest culture of Islam; and of all this its churches bear the impress. There is nothing more instruc-

tive nor more fascinating than the description of Palermo at that date by John Addington Symonds. Maybe he over-estimates the Saracen influence in the churches, unless he is thereby alluding to the pointed arch the importance of the introduction of which from Persia (possibly through the Saracens), cannot be exaggerated. Beyond this, the Saracen influence is most apparent in the ceiling of the Capella Palatina (the All Saints', Margaret Street, of Sicily) and in the patterns of the narrow vertical bands of mosaic on the otherwise plain white marble of the lower wall-surfaces, and in the Cuphic inscriptions. The original work of the Cathedral of Palermo, begun by an English Archbishop (Walter of the Mill), has given place unfortunately to later building. The Martorana, which contains perhaps the loveliest work of all, was built by the commander of Roger's navies, George of Antioch, styled Emir of Ammiraglio, and was begun in 1139 for the Greek rite which was celebrated in it till the pontificate of Honorius III. Of the Cathedral of Monreale Symonds truly says that no church "can exceed it in richness and glory, in the gorgeousness of a thousand decorative elements subservient to one controlling thought." It is in this sentence that he has summed up what I want to bring out here. . . .

A second example for us today of the revival and fusion of styles under "one controlling thought" is to be found a century later—and again it is in the kingdom of the Sicilies—under the Roman Emperor Frederick II, although he did not build churches but castles. Ernst Kantorowicz, after describing the octagonal structure of "smooth perfectly fitting blocks showing no joints," of Castel del Monte near Barletta, speaks of its "octagonal central courtyard adorned with antique sculptures and imitations of the antique, in the centre of which a large octagonal basin served as bath. Every fraction of the structure displays the mental catholicity of" Frederick's "court: oriental massiveness of the whole, a portal foreshadowing the Renaissance, Gothic windows and rooms with groined and vaulted roofs. The defiant gloom of the tiny-windowed rooms was mitigated by the furnishings; the floors were of mosaic, the walls covered with sheets of reddish breccia or white marble, the groined vaults supported on pilasters with Corinthian capitals, or by delicate clustered columns of white marble. Majesty and grace were fused in one." Elsewhere he says "The Emperor by no means contented himself with such works of art as were already to hand. His sculptors were commissioned to make more. Many heads and fragments of sculpture in Castel del Monte are probably copies of antique originals. Imitation, however, was not good enough. The Apulian stone masons received remarkable commissions and were set to work from real life, though in antique style. At times one might imagine that these were genuine relics of Roman days did not some detail betray the thirteenth century." "Not the least part of the miracle," he adds, "lay in Frederick's finding the artists who could carry out such unwonted tasks in a form so perfect. For the products of these imperial sculptors reached a level which Italian art did not soon regain. The amazing thing was that Frederick drew these artists from his own Sicilian kingdom, and begot as it were his own sculptors as he had earlier begotten his own poets." "Who," he continues, "opened the eyes of the Apulian, and indirectly, therefore, of the Italian masters, to see and appreciate the works of the ancients, if not the man who in other spheres taught men 'to draw new water from old wells'? Frederick did not himself wield hammer and chisel, yet the sculptors are his creatures and his pupils. A recent French art critic exclaims: C'est l'empereur qui a été le vrai sculpteur!" . . .

A third example for our instruction today of a transcendence above nationalities and the lesser fashions of style is in the churches of Avignon, about another century later, during the "Captivity" when the Papal Court had to be reconstructed under new conditions and on the other side of the mountains. Symonds is looking on to Avignon when he says "In this court life" of Palermo "men of letters and erudition play their first part three centuries before Petrarch taught the Princes of Italy to respect the pen of a poet."

From PRACTICAL CONSIDERATIONS ON THE
PLANNING OF THE MODERN CHURCH a Con-
tinuation read in 1933 of a Paper read to the
St. Paul's Ecclesiological Society in 1893.

O B I T U A R Y

NATHANIEL LLOYD

Nathaniel Lloyd was well known to readers of THE ARCHITECTURAL REVIEW, and we regret to announce his sudden death on December 8, 1933, at the age of 66. The following two tributes to him have come to us.

SIR EDWIN LUTYENS writes:—

Nathaniel Lloyd was a lover of all that is best in England and appreciated above all the old crafts and craftsmen of our villages, whereby traditions were carried on with a conviction that only faith in tradition can promote.

He laboured to preserve, and delved to disclose the knowledge of the past—the neglect of which is bound to destroy that England of which Englishmen should be proud and jealous.

Nathaniel Lloyd's death is grievous to his friends and to those who are interested in the preservation of our countryside.

MR. HARRY BATSFORD writes:—

The death of Mr. Nathaniel Lloyd, O.B.E., F.S.A., F.R.I.B.A., removes the present representative of a distinguished and far-reaching line of architect amateurs, though he, like Lord Burlington and Dean Aldrich, actually practised; indeed he had passed the examination and was admitted to the Fellowship of the Institute.

The contribution of persons in other walks of life to the knowledge of architecture is not inconsiderable, and it is curious that Mr. Lloyd was connected with dye works, like James Fergusson, who for a time was an indigo merchant. But it is for his great understanding and intense appreciation of old craftsmanship that Nathaniel Lloyd was particularly outstanding. The founder of a vigorous and active lithographic business, his attention was probably first turned to architecture in the course of the restoration by Sir Edwin

Lutyens of his splendid timber-roofed hall house at Great Dixter, Northiam, and the district is one of the finest for its cottage and farmhouse craftsmanship, even in the exceptionally favoured county of Sussex.

With leisure to travel, and a faculty of acute observation, Nathaniel Lloyd interested himself in all the detailed methods and devices of ancient domestic building in England, but he especially devoted himself to a minute survey of the course of brickwork in England. It is given to few men well on in middle life to produce two outstanding classics which will ensure their name being unforgotten. In his case we have the great *History of English Brickwork* and *The History of the English House*, in both of which the thesis is explained and made graphic by hundreds of comparative illustrations which he sought out and collected.

GEORGE WALTON

George Walton died in London on December 10 at the age of 66. His work has never had the recognition it deserved. Those who look through early numbers of *The Studio* will see much of his furniture, fabrics, glass and fittings reproduced. His architecture, vigorous, inventive and far ahead of its time, has rarely been illustrated. George Walton was a member of that Glasgow group with which Mackintosh is associated and the fame of Mackintosh has somewhat eclipsed his own.

That a better balance in the state of affairs may be obtained and that the public may have an opportunity of seeing the work of a great pioneer, it is hoped that a representative exhibition of his work can be arranged. Any readers who can supply any information about Walton will greatly oblige the Editor by communicating with him at 9 Queen Anne's Gate, London, S.W.1.

MARGINALIA

CAMBRIDGE OFFENDS —

AND—

OXFORD TREMBLES

Cambridge has not, perhaps, suffered to the same extent as Oxford in being spoilt by unwise building. There are no factories which accommodate "heavy" industries: a wise and far-sighted council has only recently placed a ban on their erection.

Of Oxford Clough Williams-Ellis has written "... the town has grown or rather slopped over and exuded in all directions chaotically, formlessly and meanly ..." Cambridge in the same way has extended formlessly and meanly: the Shelford Road approach is meanness without end. The blight of the Victorian villa residence is as nothing compared with the perpetrations of local builders in and around the town. Petty Cury is a typical instance of a street which has been ruined, where there are several shops which for vulgarity and bad taste could scarcely be equalled. They offend not only against themselves and the trades they represent, but against their obligations to a town in which architecture till now has been a major virtue.

The photographs which follow may in small measure emphasize the careless and unworthy setting of an architectural monument. It will be seen that many of the offences are small and trivial—for instance, the number of badly designed petrol stations seems quite in excess of anywhere else.

The Cambridge Preservation Society does what it can. The Trustees have prevented the suburbanization of Grantchester village, which at one time was threatened, and they have been agitating against the use of large hoardings for advertising, although many of these still remain, as will be seen from the photographs. (*The preface and photographs are by Wilfred Meynell Woodhouse.*)

Oxford University has a new trouble added to its others—even more permanent than what has happened to Cambridge. An alarming statement has been issued on behalf of the Oxford Preservation Trust, setting out the danger and damage to Oxford's ancient buildings caused by the vibrations of traffic passing through the city. The Warden of New College, the Rt. Hon. H. A. L. Fisher, and the Master of University College, Sir Michael Sadler, who have issued the statement, declare that they have obtained what they "believe to be indisputable proof of the gravity of the danger which threatens many ancient and beautiful buildings in High Street, Oxford, the destruction of which would be an irreparable loss."

CAMBRIDGE OFFENDS (CONTINUED)



Welcome to Cambridge! The station



By road from Newmarket and the east



One view of Cambridge which should be compared with—

MARGINALIA

STRIKINGLY POOR TASTE

The church has recently been restored in strikingly good taste, the old pews have been cleared out and the walls have been stripped of plaster revealing several aumbries, a piscina in the old chantry chapel, and other interesting finds.
The Church Times.

DEVELOPMENT AT SOUTH SHORE

Wonderful developments are taking place at South Shore. There is a building boom, and property is springing up in all directions. Whole fields are disappearing, and in their place handsome residential property is being built and wide thoroughfares laid.

On the Primrose Park Estate... an enterprising firm is building a colony of 218 houses, of the semi-detached double-bay type.

Blackpool Gazette and Herald.

THE HOUSE WE ALL WANT

It is not a modern house, I discovered, as I made my way up Camphill Avenue. There is a substantial, comfortable, faintly old-fashioned air about it; its dignity would be spoiled by any attempt at modernistic furnishings...

The drawing-room is charming, with its gold striped walls, its lofty, elaborately moulded ceiling, and its mantelpiece of dignified white marble.

Every real home has its "family room"—the cosy place in which everybody foregathers, and where the memory of numberless happy times lingers in the air... Here is the gramophone, the telephone, hidden away under a dainty cover, a capacious well-filled work-basket, set beside a low fireside stool, and an assortment of books. It is a catholic assortment: Arthur Mee's *One Thousand Beautiful Things*, Saleeby's *Sunlight and Health*, *Sketches From French History*, *Uncle Tom's Cabin*, Mackenzie's *Reminiscences of Glasgow*, *The Forsyte Saga*. More than anything else these books tell the history of the typical family and its changing interests.

Extract from a Glasgow Newspaper.

A COMPETITION IN ELECTRIC KITCHEN DESIGN

The British Electrical Development Association is holding a competition with a view to improved planning of kitchens of small houses.

Premiums of £50 and £25 in two sections are offered, and winning designs will be erected at the Building Centre, New Bond Street, W.1.

Latest date for entries, January 15, 1934.

Copies of the Conditions, price 1s., are obtainable from The British Electrical Development Association, Inc., 2, Savoy Hill, W.C.2.

CORRESPONDENCE

MORE ABOUT GARDEN CITIES

The Editor,
THE ARCHITECTURAL REVIEW.

SIR,—It is a pity that Mr. Baird Dennison did not take the trouble to find out what garden cities are before he reviewed *Le Roman des Cités-Jardins*, as had he done so, I do not think he would have made the contemptuous remarks about them that he did. He obviously holds—in common with the general public and borough surveyors—that they are merely a collection of houses, each with a separate garden and a row or two of trees in the roads. I was going to add speculative builders—but I think they know too well what garden cities are and what effect the idea would be likely to have on their activities. Consequently they pour ridicule on such notions and produce plausible imitations which deceive the ignorant, who fondly imagine that by living in the latest “little palaces” they are enjoying the amenities of a garden city without any of its restrictions. The name Garden City is unfortunate, as it suggests that there is no more in the idea than is popularly thought; namely, a garden to every house—whereas this is only one of the means that have been employed in practice to ensure adequate light and space round each house.

As I understand it, the term Garden City stands for the limitation of size of towns; the provision for expansion by the formation of new towns, each of which shall be self-contained, providing work and amusement for all classes of inhabitants and cut off from other towns by wide agricultural belts; the planning from the beginning and strict and permanent control by a powerful central authority of all development so that the good of the community shall not be sacrificed to the rapacity or whim of the individual.

It follows from this that places like Becontree are not garden cities, as they only cater for one class and provide no employment for the masses there herded together, neither are any of the suburbs surrounding London garden cities, as they are not self-contained—they are, in the main, dormitories for London, and their development and planning can hardly be said to be controlled at all. There are only two garden cities—Letchworth and Welwyn Garden City—and having lived in each for a number of years, I think I am entitled to express the opinion that with all their faults, they are far pleasanter places to live in than any other newly developed area.

I am not aware that any of the foregoing ideas have been “exploded,” and it is, I should have thought, perfectly obvious to the meanest intelligence that, had they been generally accepted, we should have been spared most of the dreadful spoliation of the countryside from which we are now suffering.

Your obedient servant,
FELIX J. LANDER.

CAMBRIDGE OFFENDS (CONTINUED)



—another. (See bottom illustration on the previous page)

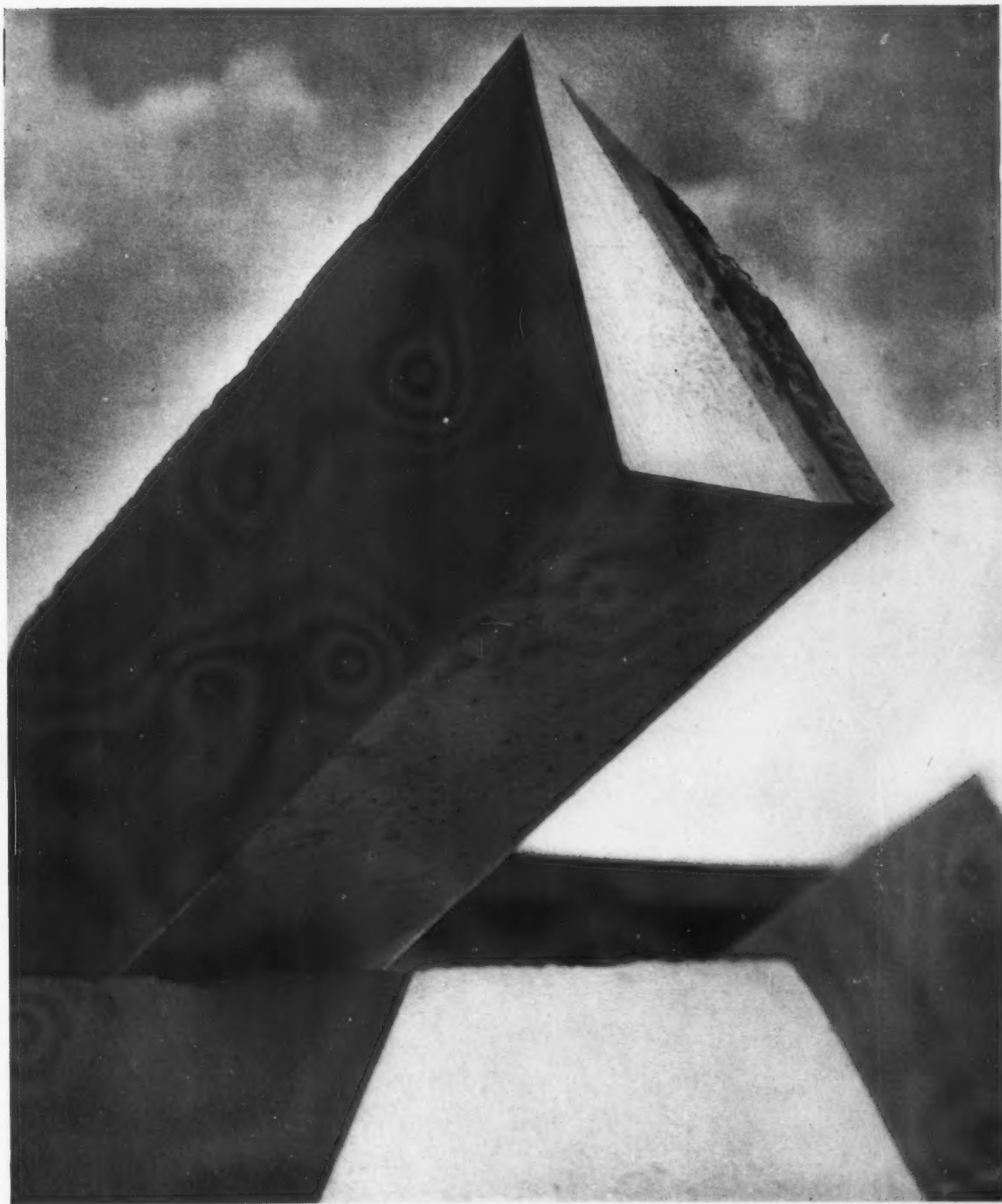


An inoffensive public house



A really unattractive one

(To be continued)



FENNING
FOR MARBLE AND GRANITE
PALACE WHARF, RAINVILLE ROAD, LONDON, W.6., FULHAM 6142-3

Plumbing at the Cumberland Hotel

By R. H. HELLYER

THE plumbing and drainage installation at Messrs. Lyons' latest hotel, in addition to being their most ambitious scheme so far, is noteworthy because it is the first example in London of a considered attempt at the simplification of plumbing detail by the combination of the waste and soil pipes, or in other words by the use of a single vertical drain in place of separate soil and waste stacks. Although these notes must necessarily be brief owing to space limitations, it may perhaps be of interest to state, in as few words as possible, the reason for this change of method. The architect, Mr. F. J. Wills, as is well known, has been responsible for many large schemes of a similar nature.

Previous experience has shown that where the soil pipes are fixed in the same shafts as the steam, hot water, and heating mains, even when these latter are insulated, rapid incrustation takes place with consequent inconvenience and a condition which could easily become a danger to public health. In the early stages when the whole scheme was being prepared, this problem was put before the responsible engineers who decided that as a too rapid drying of an intermittently used pipe conveying solids in a limited amount of water was the root cause of the trouble, the obvious remedy was to pass as much available water down that pipe as possible. The archi-

tect therefore instructed the engineers to prepare a scheme combining the soil pipe with the waste pipe conveying waste water from the baths, lavatories, etc., and to submit it to the responsible Authority—in this case the Marylebone Borough Council—with the result that we have now in the area under the control of the L.C.C. a specimen installation of simplified plumbing upon which future practice is likely to be based and, with the exception that the soil and waste pipes are combined, one that conforms in every detail to accepted English practice and methods. Needless to say, the critics have been many, but mainly negative in their recommendations. It should, however, be placed on record that the initial impetus to this new movement in English plumbing craft was given by the architect in making an unorthodox demand on account of conditions which required remedying, and Dr. Porter, the Medical Officer of Health of Marylebone, for seeing a little farther than most people and giving his permission for this progressive scheme to go forward. The plumbing trade should have cause to be grateful to both these gentlemen, who by their boldness have focussed public and professional attention upon certain problems of sanitation and the possibility of dealing with them in a scientific way.

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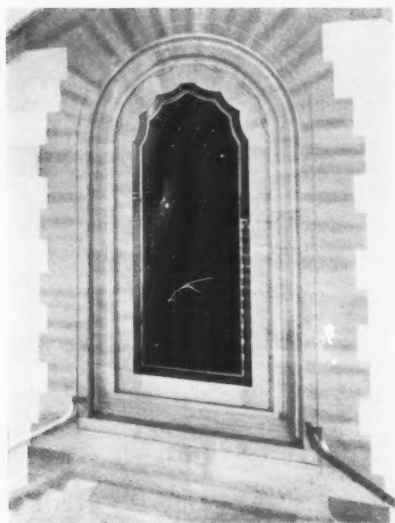
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MARBLE WALLS FOR ENDURING BEAUTY

Photo by courtesy of Country Life.

MASONIC PEACE MEMORIAL
ASHLEY & NEWMAN FRIBA ARCHTS



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DECORATION**

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THE plumbing services in this hotel provide for the hot and cold water supply and drainage of nearly 1,000 bathrooms, each containing a bath, pedestal lavatory, and w.c. The bathrooms are in nearly every case placed back to back with a shaft, entered from the corridor between, and the whole of the pipes serving the two bathrooms are accessible from this shaft. There are 65 vertical shafts each serving the 16 bathrooms arranged in pairs on the eight floors. The diagram given will show the arrangement of the various waste and vent pipes. Although a variation such as a single horizontal pipe with the closet branch dropping into it may suggest itself, and on first sight erroneously appear to effect a saving in cost and greater simplicity, a closer inspection will reveal sound points of advantage in the present arrangement. This alternative arrangement would likely necessitate a false ceiling in the room immediately below, and, in the event of a stoppage, inconvenience to a person not immediately concerned. The access plates upon the junctions will give every facility possible for clearing stoppages which could take place either in the horizontal bath and lavatory waste, or what is more likely, in the closet branch. Anyone who is familiar with the misuse of closets which takes place at hotels will support the desirability of easy access here. While relief or vent pipes are a necessity in any well designed plumbing lay-out, they assume much greater importance in a

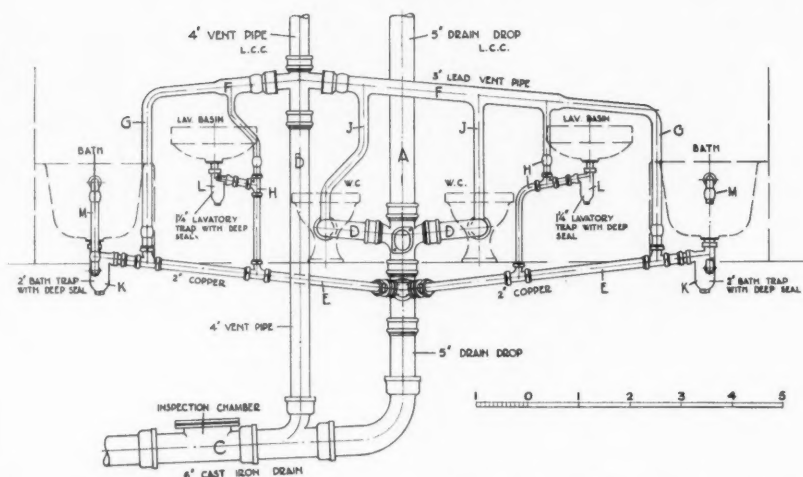
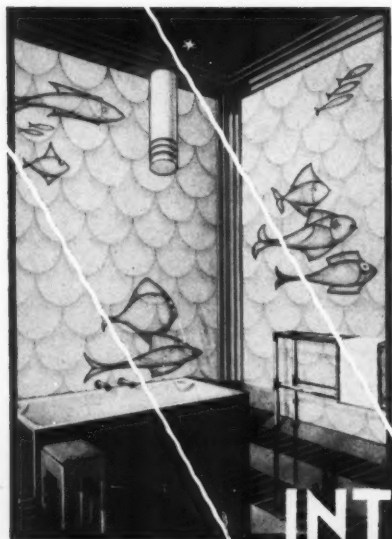


Diagram showing the method of piping for the pairs of bathrooms at the Cumberland Hotel, London. Note the separate branches for the w.c.'s and for the bath and lavatory wastes, the main and branch soil and vent pipes, and also the ventilation at the foot of the vertical drain. F. J. Wills, architect.

simplified or one pipe system, on account of the greater volume of liquids passing down the vertical stack with its "pull" on all the fittings passed in its journey. In addition to this there is the added stress of compression on account of the proximity of the lowest fittings to the horizontal drains, in some cases here only two feet, and it can now be admitted that it was this point which caused most anxiety. The test consisted of the whole 48 fittings being discharged at once, that

is 16 times each bath, lavatory, and w.c., particular attention being directed to the seal of a w.c. at the bottom of the stack within 2 feet of the horizontal drain. Beyond a slight "waving" nothing happened, proving that this enormous plug of water was adequately relieved by the vent pipes. Nothing more than a fraction of this load is ever likely to obtain in actual practice, so that one can confidently look forward to the satisfactory working of the whole scheme.

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All drainage above the ground floor discharges into the high level sewer, while the basement drainage discharges into the L.C.C. sewer, and should this latter become flooded, electrically and float controlled penstocks close the outlets, and the sewage overflows into a sump from which it is pumped up to the high level sewer. Besides the drainage from the bathrooms there is all the drainage for the hotel services, cooking, washing up, etc., the public lavatories and hairdressing departments to be provided for. That these services are upon a vast scale can well be imagined, as it is computed that 40,000/50,000 gallons of water may have to pass into the vertical and horizontal drains at any peak period. No doubt some interesting statistics are available from other sources, but it may be of interest to state that approximately 50 miles of pipes have been used in the plumbing installation.

The advantages which have been obtained by this departure from regular practice may be briefly summarized under the headings of economy and efficiency. **ECONOMY** in reducing to a minimum the number of pipes containing foul air and the saving of space in the shafts by the omission of the waste and its attendant vent pipes; likewise the proportional savings in maintenance by the reduction of areas which could cause trouble by stoppages. **EFFICIENCY** in full advantage being taken of the scouring effect of the large quantities of bath and lavatory waste water which are now being

passed directly into the soil drains. This would appear to be the strongest argument for the change over, although arising out of the new procedure is the revival of interest in certain plumbing details which were in danger of becoming sadly neglected under the old regime. It has been deemed necessary in this scheme for simplified plumbing to increase the seal of traps to lavatories and baths; these have now seals of between 3 and 4 inches to allow for evaporation and loss by siphonage or momentum.

Contraptions which pretend to do away with the necessity for vent pipes are under no circumstances permissible, the duty of the all important vent pipe in a **ONE PIPE** system being to provide for the effect of a push as well as a pull upon the seal of the trap. Puff pipes, always a doubtful practice, although admissible under certain conditions, are, of course, here abolished and the terminals of the vent pipes being fixed high above all openings to the building ensure a strong current of fresh air throughout the system, perhaps more completely than in a dual system owing to the concentration. The abolition of all gullies at the foot of waste stacks is not the least of the benefits, especially when a number of these would have to be fixed at the bottom of a well as in older designs before the new L.C.C. By-laws came into force.

To conclude it is safe to predict that architects and designers of the plumbing installation of any future building, where

the various fittings can be satisfactorily grouped, and are sufficiently numerous to warrant concentration, will be bound to consider the advantages which have been brought before their notice in the adoption of simplified plumbing by Mr. Wills, the architect of the Cumberland Hotel.

TRADE ANNOUNCEMENTS

Some Notes on Special Equipment at the Cumberland Hotel.

Lighting

The lighting of the public rooms and foyers at the Cumberland Hotel, Marble Arch, London, were designed by Oliver P. Bernard, and carried out by the General Electric Company. In the Centre Court the concealed cornice illumination is obtained by means of Sunlight tubing, the length of which, running right round the Court, exceeds 160 ft.

The restaurant comprises a system of cornice lighting in which coloured glass rods and flat white glass strips are illuminated by architectural Striplite lamps. Over 300 ft. of this continuous type of lighting is employed in the restaurant and supplemented by numerous wall lights.

A particularly attractive lighting scheme is that in the Grill Room. It consists of an indirect central ceiling reflector equipped with architectural Striplite lamps and over 900 ft. of



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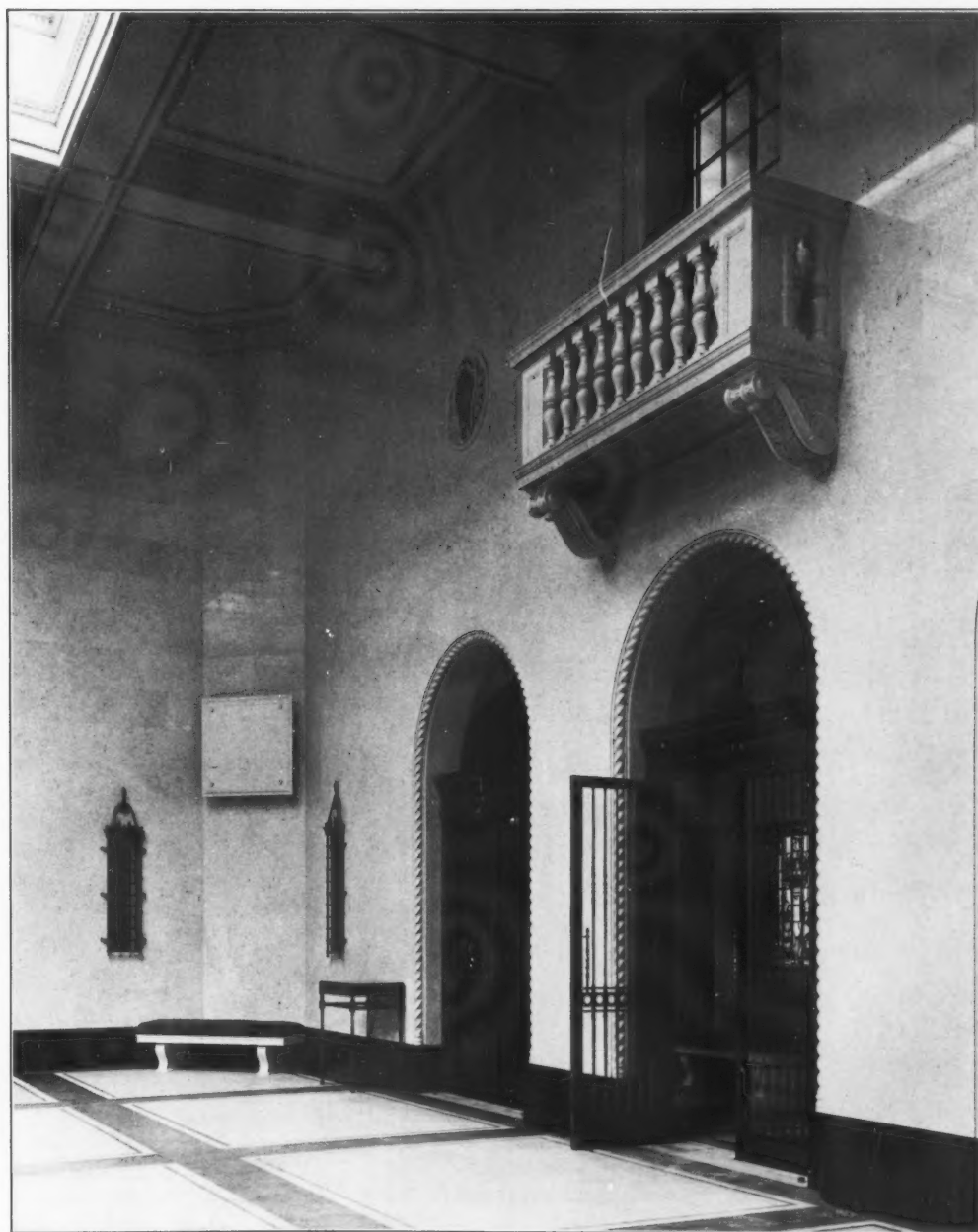
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pecially designed Staybrite steel indirect lighting reflector is employed in the scheme of beam and column lighting.

Gone are the days when electric lighting was just laid on as a matter of course after the architect and decorator had finished their work. The whole aspect of decorative lighting is now planned when the design is being created. During and since this transition, there has been a universal call for a new form of lighting—for something pliable which can be moulded to harmonize with, and become an integral part of, decorative schemes. To meet this demand the Tube-lamp has been evolved by Messrs. Maple and Company. The lamp comprises a vacuum tube containing a spiralized filament supported on a flexible metal structure, which, differing from the rigid glass structure found in other types of tubular lamps, enables it to be bent, curved or moulded to harmonize with, and become an integral part of, decorative schemes. Made of a special glass 25 mm. and 40 mm. diameter, the Tube-lamp radiates a soft white light evenly along its entire length. This light is absolutely shadowless and, being completely free from glare, is very restful to the eyes. The Tube-lamp operates direct from a.c. or d.c. ordinary mains voltage, transformers being unnecessary. Standard Tube-lamps consume 35 and 55 watts per foot run. A radiation of approximately 8 lumens per watt is obtained. The unique guarantee of 1,000 burning hours is given with each

lamp, though in practice it burns on an average for over 2,000 hours.

Standard Tube-lamps are made in lengths of from 1 ft. to 4 ft., rising every 6 in., and standard curves are the semi-circle, the quadrant, and the right angle bend. Tubes of length, curvature and diameter other than standard can be made to order. The lamps are stocked in all voltages from 100 to 260.

The various uses of the lamp may be classified as follows:—

1. *Interior Lighting.* (a) General illumination purposes. The tubes can be fixed direct on to ceilings, walls, etc., in plain or decorative formation, and thereby eliminate the cost of exterior fittings; or, if required, embodied in fittings particularly suitable for shadowless trough lighting. (b) Showcase and window lighting. (c) Advertising; display units and shop window display schemes; exhibition stands.

2. *Exterior Lighting.* (a) General illumination purposes: for interior of cinemas, hotels and restaurants, also canopy illumination. (b) Semi-advertising, illuminated letters composed of Tube-lamps can be made into signs, etc.

Air Conditioning

The Cumberland Hotel enjoys the unique distinction of being the first hotel in this country which is equipped with the necessary machinery so that "Manufactured Weather" can be supplied at all times to the public rooms, thus ensuring that the patrons will always

enjoy comfortable atmospheric conditions. This very notable advance over existing standards of comfort in British hotels and restaurants is rendered possible by the plant installed by the Carrier Engineering Company, which operates in conjunction with two "Carrier" refrigerating machines.

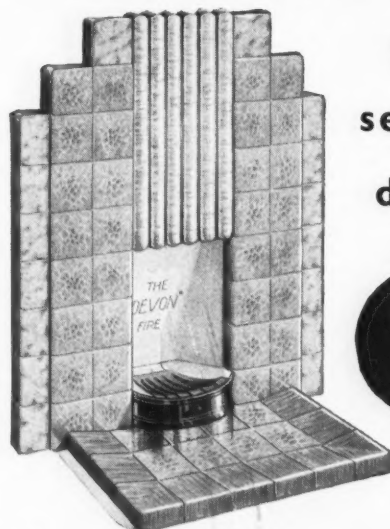
Well over 400 tons of air are distributed in the public rooms and restaurants of the hotel every hour, and this huge quantity of air is passed through machinery and thoroughly washed and filtered; at the same time its moisture content is adjusted either by adding or removing moisture according to the condition of the outside atmosphere. By means of an extensive system of ducts and a skilfully contrived distributing system in the rooms themselves, this air is distributed in such a manner that no suspicion of draughts is experienced anywhere in the rooms.

The air is forced into the rooms by seven large silent electric fans, and it is practically impossible in any room to discover where the air actually enters. The whole system is designed to change the air in the rooms every four or five minutes, and with the exception of a few smaller public rooms each room has its own separate fan, so that the maximum flexibility and economy in operation is possible.

There are two "Carrier" refrigerating machines operating in conjunction with the system. These machines are of the very latest centrifugal design, using a

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No. 2 Studio, Broadcasting House, Cardiff.

Architect for studio interior:
Edward Maufe, Esq., M.A., F.R.I.B.A.

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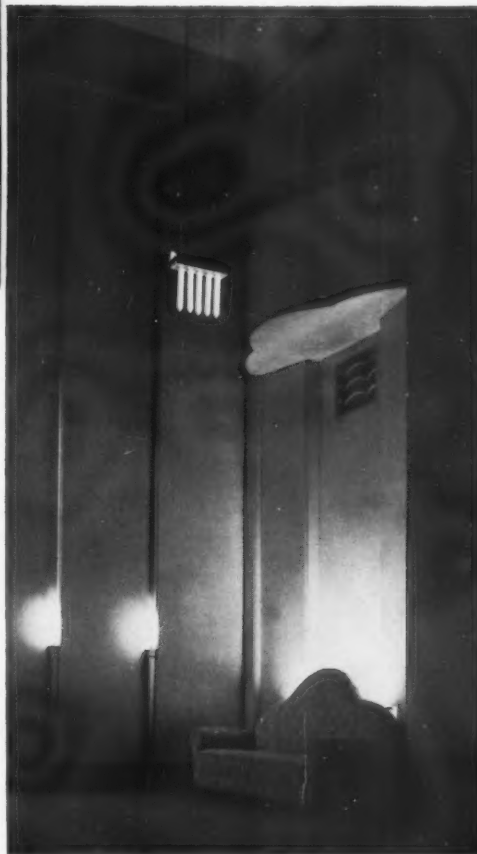


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From a general point of view the sound and thermal insulating properties of TENTEST may be regarded as identical with those of an equal thickness of cork. Architects and Designers desirous of obtaining detailed technical data beyond the scope of these notes are invited to send their enquiries to The TENTEST Fibre Board Co., who have established a Service Department for the purpose of co-operating with prospective users of TENTEST in the solution of problems affecting the decoration and insulation of any building project under consideration.



No. 2 Studio, Broadcasting House, Cardiff.
Architect for studio interior:
Edward Maufe, Esq., M.A., F.R.I.B.A.

non-poisonous and non-explosive refrigerant, whilst also they actually operate under a vacuum.

In addition to the public rooms an unusually interesting system of ventilation has been provided in the kitchens. The ventilation is effected by means of large electric fans working in conjunction with an elaborate air filtering system, and special means are employed for distributing and exhausting the air from the kitchens themselves.

Each of the one thousand bathrooms of the hotel is also connected to a special ventilating system, which, operating in conjunction with heating arrangements, ensures that the bathrooms are at all times free from steam and have a fresh atmosphere.

One of the most astounding features of the whole air conditioning and ventilating arrangements is the fact that although a total of 54 fans are installed, moving between them 2,000 tons of air every hour, yet this mass of machinery operates with absolute silence.

Refrigeration

Messrs. J. and E. Hall, Ltd., of Dartford, Kent, were responsible for the elaborate installation of refrigerating machinery in the hotel. A main plant cools two large meat stores and gives either freezing or chilling conditions at will in either of the rooms. It is capable, without extension, of cooling a third room of the same capacity, and operates with full automatic control. Very extensive

use is made of *Hallmark* automatic refrigerating machines of various types and sizes, which are used for the following purposes: Cooling cabinets for the storage of salads, cold meats, fish, pies, hors d'œuvre, pastry, and dairy produce. There are also syrup cooling cabinets, a number of water coolers, while other of Messrs. Hall's machines are used in conjunction with chocolate cooling cabinets, chambers for storing provisions on trolleys and chambers for the storage of beer. A milk champagne cooler is operated by a refrigerating machine, while others work in conjunction with a butter section and cold cupboard combined for a cold Bain Marie.

Mayonnaise is also served from a cabinet cooled by a *Hallmark* machine, while others serve a soda fountain, a cabinet for the storage of minerals, chambers for butter storage, and tables for Cox's grills with cold chambers under them.

Messrs. Mather and Platt, Ltd., of Park Works, Manchester, have issued a useful engagement pad, which they offer to send free to any of our readers who ask for it until the supply is exhausted. Early application is advisable as these pads, which are made up with a special spirax binding, are very popular.

The general contractors for Hurtwood School, Peaslake, Surrey, illustrated in

this issue, were T. J. Lovell and Sons, Ltd., Marlow. Among the artists, craftsmen and sub-contractors were the following: Medhurst Whites (bricks), Kleine Co., Ltd. (fireproof construction), Ruberoid Co., Ltd. (special roofing and roofing felt), Zeeta Wood Flooring Co. (1910), Ltd. (wood-block flooring), Beaven and Sons, Ltd. (central heating), General Electric Co., Ltd. (stoves), Tyler and Freeman (electric wiring, light fixtures and heating), Spencer and Son, Ltd. (door and window furniture), City Iron Company (sanitary fittings), Crittall Manufacturing Co., Ltd. (casements), Peter Jones, Ltd. (textiles and furniture), Mrs. Maedermott (decorative carved and painted lunettes).

Messrs. John Hunt, Ltd., were the general contractors for St. Faith's Church, Lee-on-Solent, and the following were among the artists, craftsmen and sub-contractors: Whall and Whall (west and two sanctuary windows), Eric Doudney (font panel), C. J. Pell & Co. (reinforced concrete), Blanchards (bricks), Blockcrete Company (artificial stone), Ames and Finnis (tiles), Granwood Flooring Company (wood-block flooring), Comyn Ching & Co. (central heating and door furniture), Thomson Ritchie (electric wiring), Higgins and Griffiths (electric light fixtures), John Bolding and Sons (sanitary fittings), James Gibbons, Ltd. (casements), E. M. Murray (sirapite plaster).

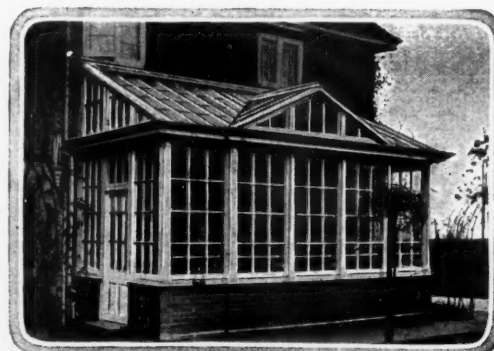
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